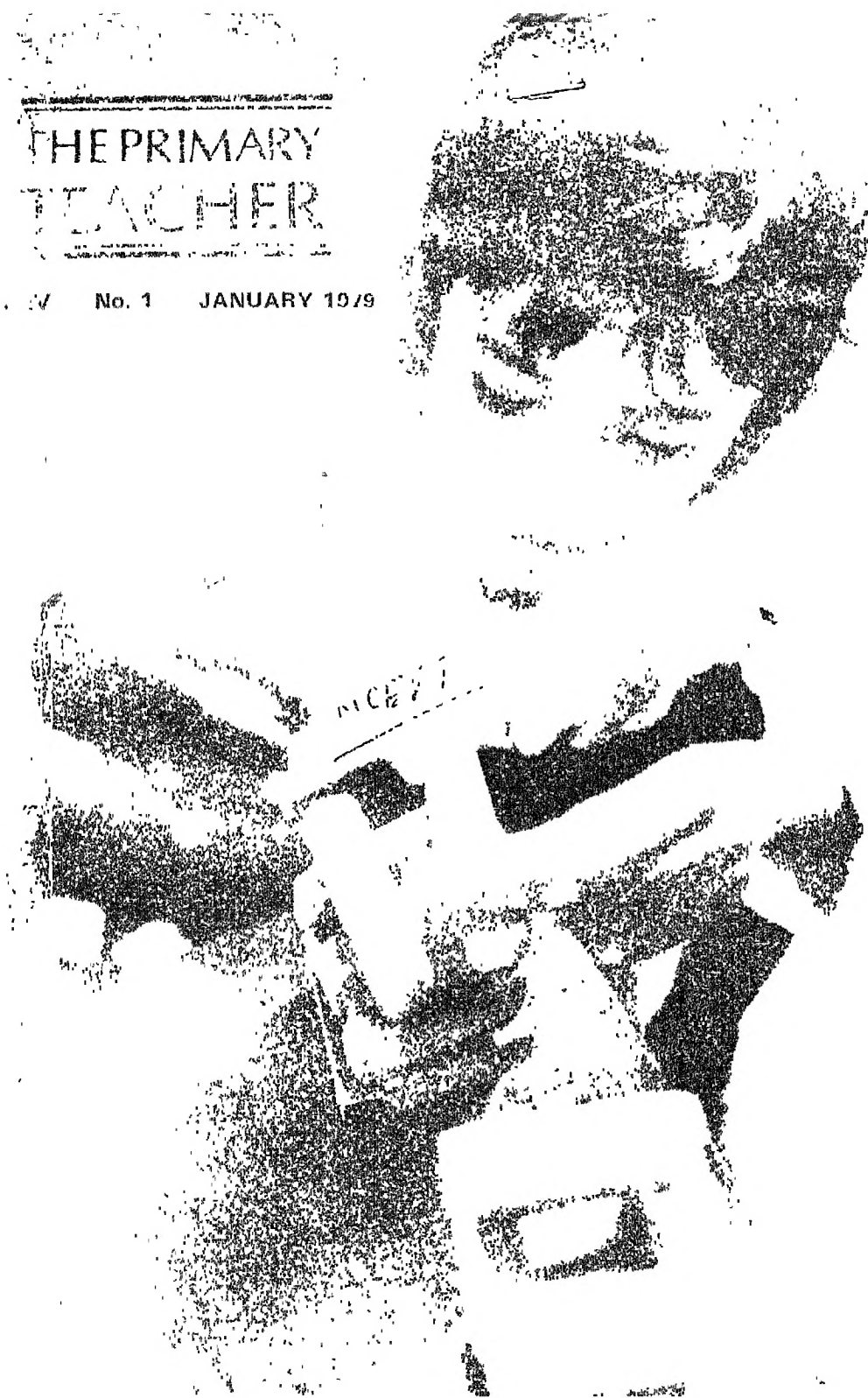


THE PRIMARY
TEACHER

No. 1 JANUARY 1979



The Primary Teacher is a quarterly brought out by the National Council of Educational Research and Training, New Delhi.

The journal intends to give to the practising teachers and concerned administrators authentic information about the educational policies being decided on and pursued at the Central level. It aims at giving meaningful and relevant material for direct use in the classroom. It would carry announcements of programmes, courses of study, etc., offered at various centres in India from time to time. It also provides a forum for the discussion of contemporary issues in the field of education.

The major features of *The Primary Teacher* are :

1. The educational policies concerning primary education
2. Questions and answers
3. States round-up
4. Illustrated material for classroom use

Subscription : A copy of the journal costs Re. 1 00, Annual subscription is Rs. 4.00.

Contribution : Articles and papers written by school teachers either in English or in Hindi are welcome. Each published article would be paid for. Two typed copies of the article should be sent in for consideration.

The paper used for the cover and text of this journal is a gift from the Unicef

General Editor : Prof. R. P. Singh

Academic Assistance : D. N. Khosla
Neerja Shukla

Production : C. N. Rao
Chief Production
Officer
: Kalyan Banerjee
Production Assistant

Editor : S. K. Malhotra

Editorial Assistant : Archana Sud

Artists : Wagh
: C. P. Tandon

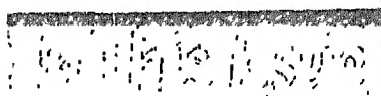
Please send your subscriptions to
Business Manager
Publication Department
NCERT, N.I.E. Campus
Sri Aurobindo Marg
New Delhi-110016



THE PRIMARY TEACHER

Vol. IV No. 1

January 1979



EDITORIAL	...	3
Development of Creative Thinking in the Primary School Children	<i>S. Kumar</i> <i>M. J. Ravindranath</i>	...
		5
Gandhiji on True National Education : Some Excerpts		10
Child-to-Child Programme	<i>Duncan Guthrie</i>	...
		13
Who is Responsible for Criminal Mentality in Children ?	<i>Mohammad Razuuddin Muazzam</i>	...
		21
Kusiara, a Mysterious Butter-fly	<i>V. N. Sharma</i>	...
		23
Health Education Story through Matchstick Drawings	<i>Abhay Kothari</i> <i>Ramesh Kothari</i>	...
		24
The Elephant : How to Draw it		...
		26



TEACHERS WRITE
NEWS & VIEWS

NATIONAL INSTITUTE OF EDUCATION
LIBRARY & DOCUMENTATION
JAN 37

Let's Solve Them !

V. N. SHARMA

We are two lamps of the sky
One for the day and the other for the night
The whole world will grope in the dark
If we stop giving light

Sun and Moon

I am the abode of wisdom
I am the most delicate part
I am the commander of the body
And not the human heart

Brain

Fire burns after death
I burn a man alive
Till I am in his mind
He cannot thrive

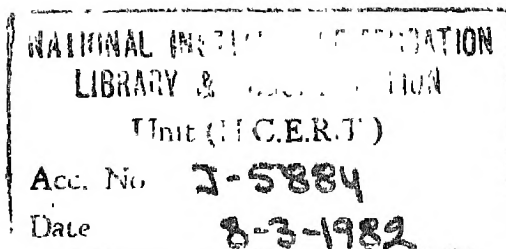
Worry

Misers and thrifty never like me
In me, they find no pleasure
But my followers die for me
They spend all their treasure

Generosity

He showed to the Whole World
That also plants have life
They are happy when watered
And shocked when shown a knife

Sir J. C. Bose



TEACHING-LEARNING LOAD

TEACHERS everywhere have a fixed time-table and given courses of study. This is a universal phenomenon and very few have thus far attempted to question it. Recently, a group of mature educationists has started giving it a fresh thought. They hold that "formal instruction in the classroom must be reduced to the minimum." The Ishwarbhai Patel Committee has, therefore, recommended "that children in Classes I to IV/V should not be required to remain in school for more than 2½ to 3 hours a day." It is a major, radical recommendation from a committee at the national level.

There is little or nearly no evidence to say how much schooling is necessary for a child. And, also, we are not very sure whether longer hours of teaching in a formal class mean a greater amount of teaching. Indeed, over

the past two decades or more the teaching load has increased in direct correspondence to complexities in life and conflicts in values. Life is gradually becoming unsure, and in place of peace and happiness we find more and more competition and worries. Consequently, the major brunt of adult problems is borne by a child who may quite possibly face quite another set of problems.

1979 has been designated the Year of the Child. Therefore, quite a few things need reconsideration. If, on the one hand, there is need for the strict enforcement of labour laws, there is, on the other hand, an urgent requirement for creating suitable conditions, so that children outside the school are inside it; and, also, they find it an interesting place to come to. It is perhaps necessary that someone looked into the time-table an ordinary school

draws up for guidance. There is little to suggest that school hours be stretched beyond three hours or so. No scientific evidence exists to say the that five-hour school is better than the three-hour school.

Of the several things which

would be done in the Year of the Child, if schools reduced their instructional hours that alone would be a solid contribution educators could make. We do hope something would be done to reduce the teaching-learning load, and for making school a little more cheerful place than it is. □



Development of Creative Thinking in the Primary School Children

S. KUMAR

M. J. RAVINDRANATH

M. S. University, Baroda

A NATION in order to progress should take care of the development of human as well as natural resources. In this respect, nobody would deny the fact that it is through education that certain desired changes are brought about in citizens and thereby the goals of the nation are attained. These changes are brought about by developing certain abilities, namely, tolerance, objective outlook, knowledge, comprehension, application, creative thinking, etc. It may not be wrong to say that it is the development of creative ability which is more important for a country which is on the footsteps of progress. The use of fire, communication, written symbols, electricity and many more inventions could not have taken place if there had not been a person who could imagine a situation never experienced, or who could picturise in his mind something he had not seen. Thus, for any aspect of national development, there is a felt need for creative thoughts. Hence, it is imperative to develop creative

thinking abilities in children who are the future citizens of the nation.

What is Creativity ?

People concerned with creativity have defined the concept of creativity in various ways. For the sake of simplicity, it has been discussed here in terms of its elements. The first element is that there must be some product of creation which can be observed. The second element is that of newness in these products which would mean that these products must be novel constructions. The third element is that of uniqueness which grows out of the unique qualities of the individual in his interaction with the materials of experience. Based on these elements, creativity could be defined as "the creation in action of a novel product, which grows out of the uniqueness of the individual and his experiences." It is not restricted to some particular content, and it could be seen in any form of activity, for example, farming, preparing instruments, painting, music, planning, designing, etc.

Creativity as defined above does not distinguish between good and bad products. Both good and bad products are creative and involve the same process to produce, although social value is taken into consideration when planned efforts are made to develop creative thinking ability. With this understanding of the concept, the question is how a teacher can develop creative thinking ability in his pupils ? To develop this crucial

ability, the teacher would require the knowledge of (i) the stage at which it can be developed; (ii) the know-how of developing this ability.

Stages of the Development of Creativity

If a teacher knows the age-level characteristics of the creative thinking of children, it will facilitate him in developing this ability in his pupils. Research in this field reveals that various types of training and stimulation are capable of increasing the quantity and quality of the creative thinking of young people and adults. It is found that the greatest contributions are made by most of the people when they are between the age of twenty-six and forty. Political leaders, on the other hand, it is observed, reach their best when they are between forty and fifty-five. However, the primary stage is the foundation for the later developments. It is this stage which can promote or restrict the later development of creative thinking, depending upon how as a teacher one deals with his pupils. Hence, every effort should be made by the teachers to foster creativity in children at this stage.

The findings of the research studies conducted at the primary level by Kirkpatrick (1900), Colvin and Mayer (1906), Simpson (1922), Mearns (1931), Lally and Labrant (1951), Barkan (1960), and others reveal that the children in the first, second and third standards are more imagina-

tive than those in the fourth and fifth standards. Another interesting observation is that there is an increase in the creative ability with the level of class : it reaches the peak in the third standard, and then there is a fall or decline. This demands that the teachers at these stages should be careful in planning and implementing their learning experiences for fostering this ability in the pupils. They should keep it in mind that children enjoy socially more freedom at this stage and they come out with free expressions without any inhibitions. Therefore, every teacher must exploit this situation to develop creative thinking ability in children which is of paramount importance for human advancement. However, this does not mean that scant efforts should be made in other grades. What is advocated here is that the first, second and third grades are the most appropriate to develop or foster creative thinking in children. The issue that arises here is what sort of learning activities or experiences should be provided to the pupils to develop their creative thinking ability ?

Regarding the development of creative ability there are two schools of thought. One believes that all mental abilities are hereditary and cannot be developed, while, according to the other, mental abilities are skills which can be developed through training. However, creativity is hereditary and its manifestation depends upon training. If we consider real life situations, it becomes apparent that it is the application aspect of

an ability that is more important than the mere possession of it. This calls for the teacher to train his/her pupils in such a way that its manifestation reaches perfection. This, again, calls for the teacher to have a clear understanding of the process through which a creative idea is produced. So far as the occurrence of a creative idea is concerned, the situations could be classified into three categories. Though arbitrary, the classification is heavily supported by our personal experiences. The three situations are :

Firstly, when a person is confronted with a problem and he has a strong desire to solve it, he consciously makes an effort to solve it. Here, in this situation, the thoughts are organized and reorganized on the basis of earlier experience and imagination in order to solve the problem. Through this mental process, the person may find the solution but on several occasions he may also fail. However, the idea of this failure remains in his unconscious mind.

Secondly, and more frequently, a creative idea may emerge spontaneously, out of nothing, without any conscious effort being made in the direction. For example, a person may strike an idea while thinking something completely different or he may catch it while taking bath or stepping into the bus. Another example often cited of the solution of a scientific problem without any conscious effort is Otto Loewi's proof of the chemical medication of nerve

impulses. This came to him vividly in a dream, but on awakening he could not remember the details of it. The next night, fortunately, the dream was repeated. This time, before going to sleep again, he recorded it fully and in the laboratory the next day he performed the critical experiment that proved the truth of the solution that he had dreamt.

The third situation arises when a person experiences something and this experience provides him with a solution for the earlier confronted problems. Archimedes, while taking bath, noticed the water flowing out of the tub when he was inside the water and this solved the problem of gold crown. When the unconscious mind finds the solution, it immediately transfers it to the conscious mind and the creative idea props up in such a situation when consciously a person is thinking something different. This transfer of the idea depends on the freedom of expression which an individual enjoys. If there is an obstacle in the individual's freedom, the unconscious mind will not transfer the idea to the conscious mind. On the contrary, even the conscious mind will suppress the idea.

Thus, the above discussion indicates that there are five important elements which aid the development of creative ability. These elements are :

1. Strong desire to solve the problem.
2. Earlier experiences of an

- individual.
3. Capacity of an individual to imagine.
4. Organization of thoughts based on experience and imagination.
5. Freedom of expression.

Activities which Facilitate Creative Thinking

The common experience of the teachers who are engaged in teaching at the primary level would indicate that the children at the early stages, particularly those in the first, second and third standards, are more imaginative, have a strong desire to solve the problems, are very curious to know different things and are free from social restrictions. In such a situation the teacher's job should be : (i) to encourage the children's curiosity, (ii) to provide them with opportunities for imagination, (iii) to encourage their free expression, and (iv) to provide them with opportunities to organize and reorganize their thoughts to arrive at solutions of certain problems. Keeping in mind the above-mentioned points the teacher can have an insight into his own method of teaching and modify it to suit the requirement. Here, what is important to mention is that, at present, in most of the Indian classrooms we as teachers restrict the freedom of the students. We often try to direct the children to wear this, read that and behave in a particular fashion. And whenever there is unexpected behaviour on their part, we usually try to suppress it. We often discourage them from

asking embarrassing questions. These and several other instances indicate that creativity is being curbed in our classrooms. Therefore, it is necessary for the teachers to provide the right kind of climate for the promotion of pupils' curiosity, freedom of expression and imagination.

But, the crucial issue is what the teacher can do at the early stage when the pupils do not have reading and writing abilities and what activities he can undertake when the pupils have developed these abilities. First, let us consider those activities which can be used for the children who do not have language ability.

The activities mentioned below are designed to be used by the teachers for promoting creative thinking abilities in their pupils. They are by no means exhaustive and final. A creative teacher can think of many more activities which are inexpensive and easy to undertake.

1. Clay-modelling
2. Paper-cutting
3. Sketching
4. Puzzles
5. Drawing and painting
6. Playing with blocks
7. Playing with mechano sets

While providing the students with these types of activities, one important factor to be borne in mind by the teacher is that complete freedom should be given to the pupils. Further, there should be complete acceptance of the work done by the pupils. This would facilitate the pupils' divergent

thinking process and imagination. For example, the pupils engaged in clay-modelling, paper-cutting, drawing and painting, sketching, etc., without much guidance from the teacher, would imagine many things in various ways and give shape to their divergent thoughts by constructing models, or through drawings, etc. Simple puzzles and riddles suitable for a particular age-group could also be used effectively for developing divergent thinking. In these puzzles and riddles, the pupils have to think of a number of ways to solve them. To cite an example, there is a line AB. How do you make it smaller without rubbing the line? Like this, one can think of many situations.

The other ways of developing creative ability may be through the narration of the works of scientists in the form of stories, telling stories which are highly imaginative, showing the students certain objects and asking them in what all ways these could be used, etc. The questioning technique is another way of developing creative ability. Divergent questions properly framed would enable the students to imagine, organize their thoughts and come out with novel and original ideas.

In addition to the above, the

following activities can also be undertaken, particularly when the students have developed their linguistic abilities :

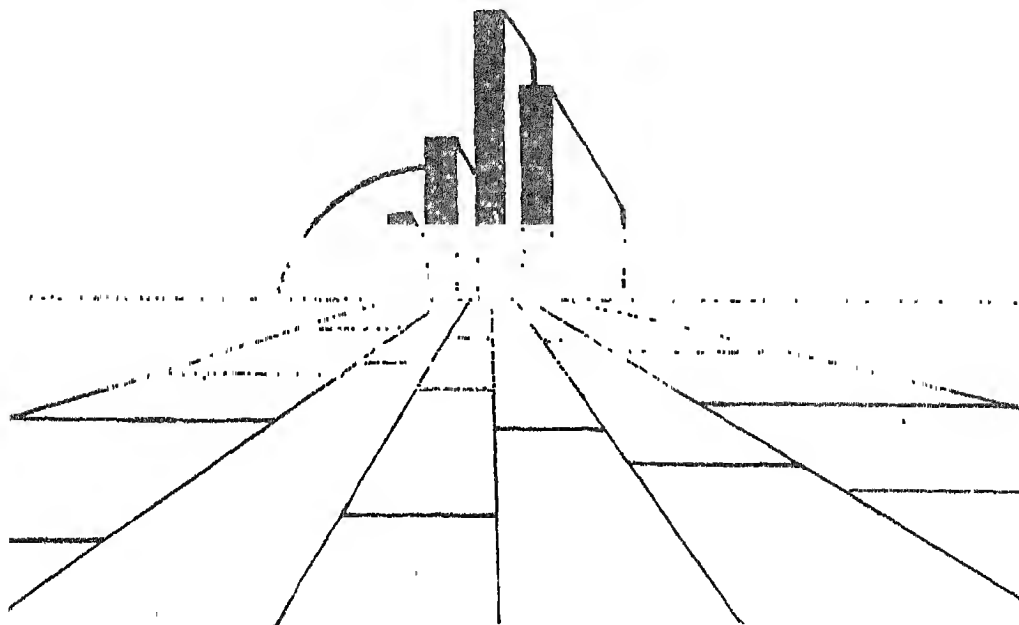
1. Asking the students to write highly imaginative stories.
2. Asking the students to write suitable headings to a given story.
3. Posing certain problems which could be solved in several ways, for example, divide a square into four equal parts in as many ways as possible, etc.
4. Asking them to make a number of observations regarding a particular object, for example, a burning candle, etc.

Lastly, whatever may be the technique or activity adopted to develop this ability, much depends on the teacher and his attitude. With perfect conviction, he should join the students in every activity. He should try to enter the domain of fantasy rather than reality and should do everything to develop confidence in the children about their thoughts. The teacher should be a creative person himself and should provide children with every opportunity to expand their domain of imagination. □



Gandhiji on True National Education

Some Excerpts



THE REAL difficulty is that people have no idea of what education truly is. We assess the value of education in the same manner as we assess the value of land or of shares in the stock-exchange market. We want to provide only such education as would enable the students to earn more. We hardly give any thought to the improvement of the character of the educated. The girls, we say, do not have to earn, so why should they be educated? As long as such

ideas persist there is no hope of our ever knowing the true value of education.

Our teachers must be men of high moral character. Conditions must be created to enable the poorest Indian to receive the best possible education. There must be a happy union of literary knowledge of *dharma*. Education must be related to the conditions of life in our country. And the heavy burden on the minds of our young men resulting from the use of an

alien language as the medium of instruction must be removed. Unless we reshape our education so as to fulfil the foregoing, the level of the life of our people cannot be raised.

True national education should be imparted through the language of each province. The teachers must be men of high ability. The school should be located at a place where students would get clean drinking water, pure air and a peaceful atmosphere. The surroundings must be perfectly healthy. The scheme of education must provide for securing to the students a knowledge of the main occupations and religions of India.

In the national education to be evolved:

1. Education must be imparted through the mother-tongue.
2. There must be accord between the education a child receives at school and the environment of the home.
3. It must be so planned as to meet the needs of the majority of the people.
4. The teachers in primary classes must be competent men of good character right from the first class.
5. Education must be free.
6. Overall control must be in the hands of the people.

1. Education must be imparted through the mother-tongue. It is a pity that we are required to prove this self-evident truth. If we had not been dazzled by the lure of English, there should have been no need to prove this most

obvious truth.

No one suggests that English literature should be given up. We should have translated what is precious in it into our different languages. Japan and South Africa have done it. In Japan, they taught German and French to some who then translated good books from German and French into Japanese. It is not that German has nothing to borrow from English. Even so, not all Germans learn English. No German receives his education through English. Only a few Germans learn English and then translate into German whatever they think will be of value to their nation, and thus serve their mother-tongue. We should do the same.

2. There must be accord between the education given in the school and the home. The reason for this is obvious. Today, there is no such accord between the two. In national education, we must see that such accord is achieved and maintained.

3. We will now pass on to the third attribute of national education, namely, that it should be so designed as to meet the needs of the majority of the people. The great bulk of our people are peasants. So, if our boys had been given, from the very beginning, a knowledge of agriculture and weaving, and if they had cultivated an appreciation of the needs of these two classes, and if these classes had received the scientific training in these vocations, our peasants today would have been happy and prosperous. Our cattle would not have been weak and diseased as they are today. Our peasants

would not have been crushed with the weight of debt-incurred by poverty. Our produce would not have first gone to foreign countries as raw material and then brought back to us in the shape of finished goods to drain us of wealth. Today we feel ashamed of such a state of affairs. We would not have paid England 85 crore rupees a year for cotton cloth. The prevailing system of education has made slaves of us instead of masters.

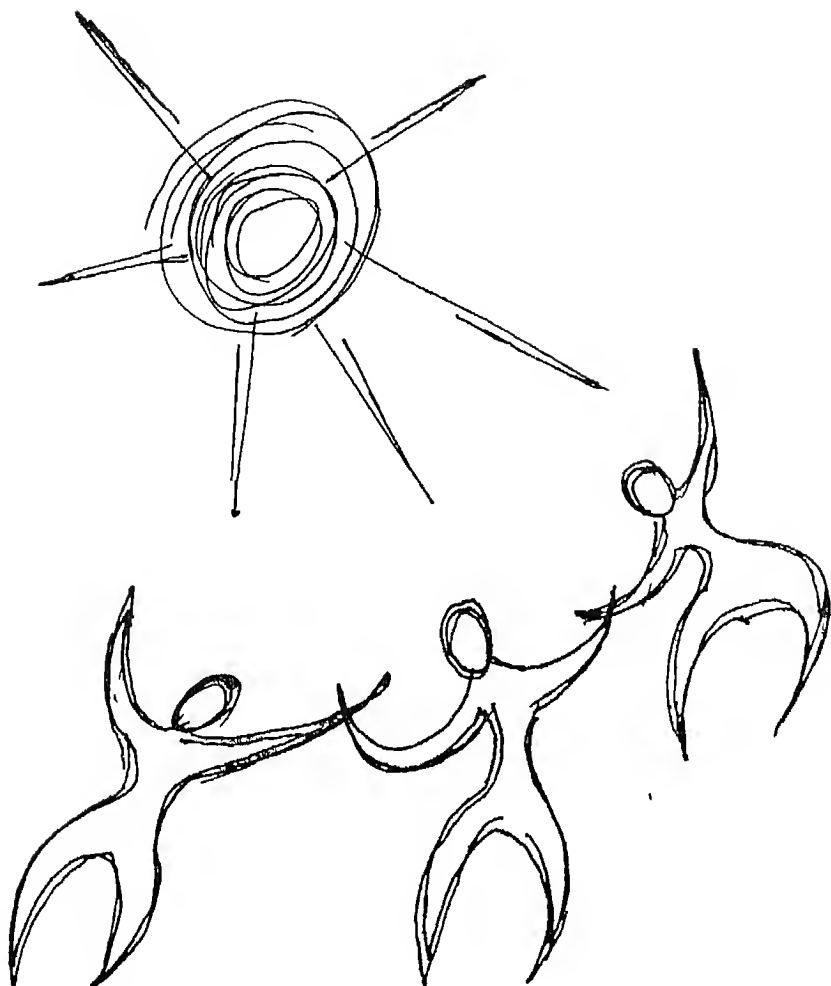
4. In the lower stages of primary education teachers must be men of high character. There is a proverb in English: 'The child is the father of the man.' We have a similar proverb: 'A child, even while in the cradle, shows signs of what he is going to be in the future.' If we entrust our children, in their most impressionable years, to incompetent teachers, we have no right to expect that they will grow to be men of good and strong character. That would be as absurd as to sow the seeds of *kauvach* and expect from them the flowers of *mogra*. We must procure the best teachers for our children, whatever it may cost. In

ancient times, our children received their education from learned and wise *rishis* and *munis*.

5 The other requirement of national education is that it should be free. Education should not be made to depend on money. Just as the sun gives light to all equally and rain pours down for all, so must learning be made available to all.

6. Lastly, the people themselves must have control over the planning and carrying out of education. In the exercise of this control lies education too. People will then have faith in the education meted out to their children, and feel their responsibility towards it. When this stage is reached and education occupies an important place in the life of our people, it will be possible for us to obtain *swaraj* with no trouble at all. Therefore, it is our duty to initiate such education. It is also our right to ask the government for it. But we can approach the government about this matter only after we start the ball rolling ourselves. □





Child-to-Child Programme

DUNCAN GUTHRIE
Director
Institute of Child Health
London

CHILD-TO-CHILD is an international programme designed to teach and encourage school children during 1979, the International Year of the Child, to concern themselves with the health of their younger brothers and sisters. Simple preventive and curative activities appropriate to the local situation will be demonstrated and

taught to the children in school, so that they may pass them on in the family or village environment.

This programme is for the children most in need in the world. These are the children under five living in rural areas and poor towns of developing countries. There are 350 million children in the world without essential services in health, nutrition and education. This programme will try to use the services of the school child to help the healthy development of the pre-school child.

How the School-age Child can Help

Even in remote areas of most developing countries there are usually primary schools. We hope in 1979 to involve the school child with the pre-school children in his family, village or town. In developing countries the school-age child often carries a young brother or sister around, feeds him, talks and plays with him and provides a great deal of stimulation.



This programme will build on the knowledge and practices which already exist. Some secondary school children may help in this programme but they are often very busy. Primary school children still

want to help the family and they have the time. We know that primary school children learn new ideas at school and talk about them at home. Most of the school children of today will be parents in ten years.

Things the Primary School Child can Do

We hope primary school children will learn about the health and development of very young children. Doctors and senior teachers in each country will form a national committee and they will provide teachers with special materials to use. When away from school, the children can collect simple information and the school can give this to the leaders in the village or town. This information will help in health planning.

Primary school children can, for example,

1. Count the number of children under five in a village or street.
2. Find out how much foods cost and how prices change during the year.
3. Find out how much water a family uses and where it comes from.

Other Things the Children can Do

1. Teach and play with their young brothers and sisters in a way which helps them to develop.
2. Tell the family the best energy foods and how good they are for small children. Doctors now think that

several meals and those foods which give a lot of energy are as important as protein foods.

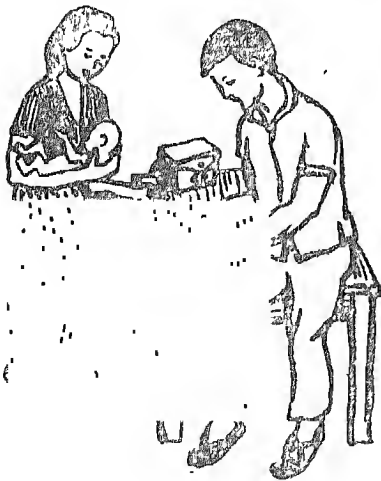
3. Make sure that children with diarrhoea drink enough water with sugar and the right amount of salt added.

Using Other Groups

Other groups like Boy Scouts, Girl Guides and religious, youth and women's groups can also help.

Bringing Health Workers and Teachers Together

One of the most important parts of this programme will be discussions between teachers and health workers. The national Ministries of Education and Health can start these discussions and encourage the health workers and teachers in rural and poor areas. This programme will fit in with the efforts of international organizations and governments to



develop part-time health workers (village health workers, social

workers, 'promoters', etc.). They can pass on their knowledge in the village or town better than other medical workers.

Children as Part-time Health Workers

The part-time health worker is now widely accepted. Many of the preventive and curative activities of these workers can be undertaken by school children, with enjoyment.

Early Warning Signs of Dangerous Illness

- One day's fever in babies, and three in children and adults;
- Refusal of food by small infants;
- Inability to see when it is almost dark—night blindness from lack of vitamin A;



- Cough and rapid breathing (we can count the breathing rate against a normal pulse);
- Two weeks' cough;
- Fits, and any alteration in consciousness.

Pneumonia is a common cause of death in small children. Many of these deaths can be prevented if older children and parents recognize the illness early. If a child has taken a violent exercise, other children can recognize the signs—quick breathing, movement of the soft side of the nose, and additional movement of the lower chest. If a child counts his own (normal) pulse (60-70 per minute) until he reaches a hundred, we will find that the child out of breath has breathed more than 50 times.

Giving the Right Drink to Young Children with Diarrhoea

Severe illness and death from diarrhoea can be prevented in young children if water with a mixture of salt and sugar is given to them frequently. For every stool the child with diarrhoea passes he requires a glass of water, to which the right amounts of salt and sugar have been added.



Salt Water Sugar

A special plastic measure is available. This is used to measure the salt and sugar into an ordinary teaspoon, so that in future the solution can be made up at home.

Measuring Malnutrition

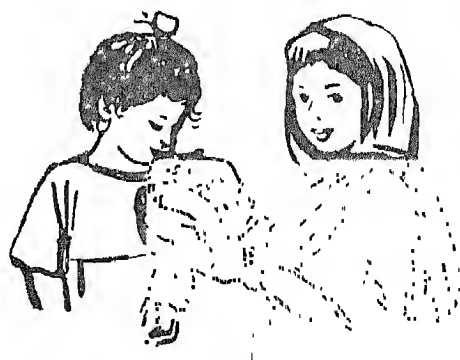
The Shakir strip placed around the middle of the upper arm effectively identifies the less well-nourished children between the

ages of one and five. This technique has already been used by school children. We do not know, however, how they will pass their findings on to adults.

Nutrition Teaching

Many young children suffer from too little food containing energy, and not from lack of protein. If given extra protein, these children will use it as a source of energy. An amount of the most commonly used food which provides the energy requirement—1200 Cals—should be prepared by the teacher in a form that would be eaten by local children. The teacher and children will see at once that the bulk of this would be too much for a small child. The teacher would explore with the children how to obtain the necessary energy through such foods as oils. If oil is not available, suitable oil-producing plants should be grown in the school garden.

The school teacher may find some way of getting across the need for at least three meals and snacks each day (a delicate sub-



ject). As the older child often

feeds the younger children, he can help the parents give the child more meals and snacks.

Neighbourhood Health Action

Information on clinic timings can be made known to families through the children. They may take the younger children to the clinics, and reassure them. They may help the work of the clinic in dressing and undressing the younger children, help with weighing, etc.

Activities in the clinic can be reinforced through class teaching in mathematics, science and language, and developed through appropriate graphs, reading cards and role play.

In countries where blindness from lack of Vitamin A occurs, children should be taught to collect leaves which are normally eaten green, dip them in boiling water, dry and store them for the time when fresh leaves are not available.

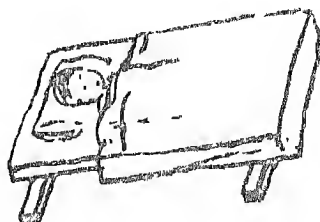
Hospital Experiences

What happens in hospital should be taught to the class and to the younger children. For example, a fractured bone can be represented by a broken stick and repaired with Plaster of Paris. The X-rays, if taken, should be shown to the class.

Care of the Ill Child and First-aid

Using a small child in the class, children can learn the ways to make a child more comfortable when it is sick. They should encourage the child to drink and

eat, cool down the child with high fever, bathe any eye which has a discharge, etc. Learning how to prevent cuts, burns, and other injuries to themselves, they should also be taught how to protect the



younger children. They should learn first-aid techniques using, where possible, material from their own home.

Dental and General Health

Children should look at each other's teeth and those of small children. They should learn to recognize dental caries and inflamed gums. They should be shown how a healthy milk tooth, lost by a younger child, is affected by being immersed overnight in a fizzy drink.

The community's water supplies should be recorded, and their adequacy discussed. The need for children to wash their hands before handling food for themselves, or particularly for small children, should be emphasized.

Children would be told of the Chinese programme to rid their country of flies as one of the pests. The children would learn the life-cycle of the fly and clear from around the school all places where flies could breed. If simple fly swats could be made, the children

would run competitions to see who could kill the most flies around the school

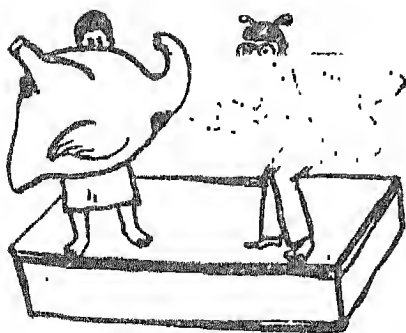
Big Brothers and Sisters

The older children already spend most of their time at home caring for their younger brothers and sisters. They will have fun providing them with a more stimulating environment, and so playing an important part in the younger children's development. They will do this through the following activities :

Talking to them : Whatever they are doing, however simple, they should put into words for the younger child to hear and, in time, to copy.

Story-telling : Encourage grand-parents to tell stories and pass them on to the smaller children.

Acting and role play : Plays may show the activities of mosquitoes, flies and other



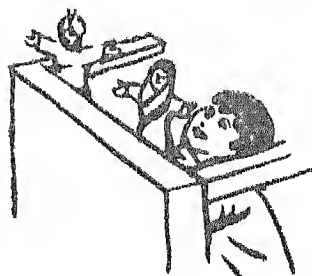
health hazards. These can be performed for the younger children at the clinic or in a pre-school group.

Playing games with them : As well as knowing their own traditional games, the children should be taught others, particularly those requiring dexterity and memory.

Census of small children and records of their health : Almost nowhere do health workers and schools know the number of small children, information which is necessary for planning in health and education. The small children in the neighbourhood can be counted, and information on their illnesses recorded, particularly infectious diseases. Where possible, a health worker should come to the school regularly to discuss these findings, and help in teaching.

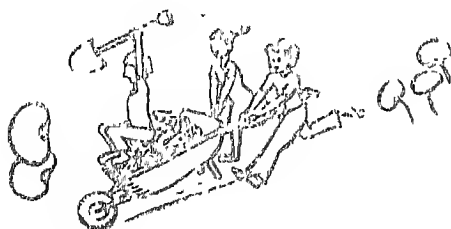
In communities where it is acceptable, a record of pregnancies and births can be kept. Where weight charts are left at home, information on immunization and attendance of younger children at clinics can be collected.

Puppets : These can be made from leaves, paper, cloth or bits of waste material. The school child makes these at school,



creates a story, and gives a puppet show to the younger children at home.

Recognition cards and drawings: Common conditions in small children, such as skin diseases, eye conditions, etc., may be recognized by the children from coloured cards. Similarly, lameness and other results of polio can be recognized from drawings. As well as identifying these conditions, the cards can suggest simple treatment at home.



"Best buy" diets for young children: If food is sold in markets or shops, its price and availability can be recorded from season to season. The teachers and children can then discuss the best food to buy for small children at different times of the year, particularly emphasizing their energy requirements.

Child spacing and family planning: This is a sensitive subject and care will have to be taken not to give offence. Probably in all countries some information on how often mothers have babies can be obtained and studied. The breast feeding of

children for about two years can be related to the longer birth interval. Difficulties for mothers with children born at close intervals can be discussed, and the advantages of a birth interval of three to four years stressed.

How to Develop the Programme

Each country involved in the Child-to-Child programme will develop its own programme. The following proposals are presented as possible guidelines.

It is hoped that each country will have its child-to-child committee as part of its national programme for the International Year of the Child. This committee, probably with representatives from the Ministries of Health and Education, will decide on appropriate activities. Only one or two activities will be advisable for each school term, and the Education Department may suggest a special child-to-child week, or two weeks, in each school term. During the child-to-child week(s) the National Year of the Child Committee will encourage mass media such as radio, newspapers and magazines to carry similar material.

Many school teachers will wish to involve organizations such as Scouts, Guides, religious groups, or even develop their own health brigade to undertake work in the neighbourhood. Plays and demonstrations could be arranged, and a certain amount of 'show' encouraged, e.g., bands, marches, songs, badges, and knowledge

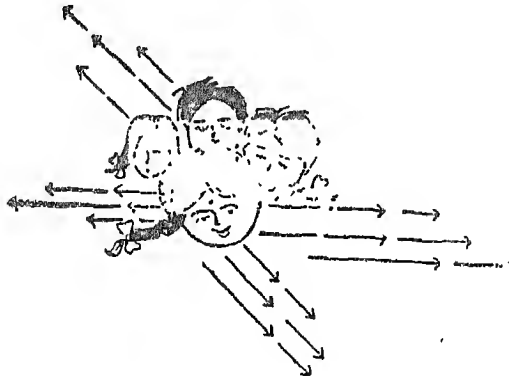
and skills rewarded.

Evaluation

The National Child-to-Child Committee will also develop a system for evaluation. This may involve simple questions to identify the knowledge of the children before the beginning of the activities and again afterwards. This can be repeated in different

schools during the course of the Year of the Child.

Questionnaires might well be compiled by the students from teacher-training colleges. It is important that the education and health authorities should be able to see the improvement in the children's knowledge – and in the health of both school and pre-school children. □



Who is Responsible for Criminal Mentality in Children ?

MD. RAZIUDDIN MUAZZAM
866, *Rahim Manzil*
Shahganj, Hyderabad

It is an open reality that the world of crime is wide enough. Several kinds of criminals are found in society. From the social point of view, juvenile delinquents, particularly those below eighteen years, generally, form a potentially dangerous group of criminals. By and large they tend to engage themselves in arson, home desertion, and other activities even involving sex and intoxicants. It may be observed that in our society today, the number of juvenile offences is ever on the increase.

Psychologists hold different views on how and why of juvenile delinquency. Some research scholars treat it as ancestral inheritance. Children do what they see their parent do. Others find its cause in the environment in which children are brought up. According to them, poverty and lack of resources form dominant factors of child delinquency. But, a professor of psychology at the University of London studied juvenile delinquents and upheld both the causes, among others. However, he did come across several juvenile delinquents whose ancestors were

either gentlemen of good character or belonged to rich families. More cruel than poverty is the broken home condition that leads to serious maladjustment and delinquency. It is for the reason of mutual unpleasantness among parents that children get neglected and at times even isolated. This kind of unpleasantness germinates criminal tendencies in the minds of children. Besides, orphans and step-children who are generally neglected in their families also tend to suffer from delinquency.

Some children suffer from fear complex, emotional tantrums, disappointment and confusion which in turn lead to their delinquent behaviour. Similarly, some children lack mental capacity, due to which they cannot distinguish between good and bad. In a way, they do not have any sense of discrimination. These types of children commit series of wrong acts in their day-to-day life. It is because of things like these that children fail in developing rapport and relationship with other people. Such are the kinds of internal factors responsible for child delinquency.

Amongst the external considerations, the most important one is vocational misplacement. A child's lack of interest in a particular vocation soon results in nervous tension and disappointment. And in order to seek change, he commits offences so that he may feel a sort of lightness or amusement. Besides, children, generally, waste

their leisure time in idle play in the company of friends, and even enjoy themselves by committing offences in their playful mood. The result is that juvenile delinquents particularly in the company of friends feel proud of their offences. Not only that, their companions try to applaud them for their courage and boldness. Thus, even a child of good nature becomes a party to juvenile behaviour.

Therefore, on the whole, nearly eighty per cent children indulge in juvenile delinquency in one way or the other. But the really delinquent children are generally dull and lazy, ill-tempered and directionless in their attitude towards life. For this, both family and social environment are mainly responsible. An atmosphere of peace and affection in the family coupled with parent's right direction and education may go a long way in alleviating, in a way, the malady of child delinquency.

Proper care and education of the deprived children may also be helpful in this direction. It goes without saying that the depressed classes of society remain so busy from morning till evening in earning their bread that their children, due to want of care and attention, get neglected, fall prey to and become involved in different kinds of offences. Let alone the deprived and depressed classes, even the over-affluent sections of society tend to neglect their children because of their very fast life. This also results in delinquent behaviour. Thus, in order to reduce or end criminal mentality in children, it is essential that both parents and society should realise their respective responsibilities in the proper bringing up of the children. The Government and the rich sections of the society may provide necessary facilities and resources for the proper training of these children in a special type of institutions, which need to be set up.



Kusiara, a Mysterious Butter-fly

V. N. SHARMA

KUSIARA is found in the forests of India, specially in the jungles of Madhya Pradesh and Uttar Pradesh. It is just like the egg of a hen. It is usually found hanging on the thorny bushes of plum and *kicker* trees and also on the fence surrounding the fields, right from October to July, waiting for the rainy clouds and their heart-rending thunders. Evidently, there is no hole in the Kusiara for the air to pass in. Apparently, we can be sure that there is no life in and about it. As soon as the clouds of July thunder loudly, the Kusiara butter-fly immediately comes out and lays eggs about thirty to fifty in number.

There is sticky material on all the eggs and, therefore, every egg gets firmly stuck to the place where it falls. Generally, the eggs stick to the thorny bushes from where the Kusiara fly first begins

to creep after coming out of Kusiara. The outer layer of Kusiara is very hard and it is therefore very difficult for the enemy birds and creatures like lizards and chameleons to eat them. By the end of June the eggs are fully developed and something like kernel is felt inside them

If an immature egg is cut, a brown-coloured conch-shell-like thing comes out which smells abominably. This conch-shell turns into the Kusiara butter-fly in July.

The Kusiara fly has two muddy wings, six legs, two eyes and two pointed horns on its head. The Kusiara-fly dies after four moultings.

Empty Kusiaras are of great market value. 'Kosa' cloth is made out of them. They are boiled and after a certain temperature threads are taken out of them. These threads are then spun and woven into cloth. 'Kosa' cloth is available at high rates. Kusiara threads are like silk threads and the Kusiara butter-fly very much resembles the silk-worm. □

FIG. 1 From left to right .

1. Conch-shell-like thing which is taken out from an immature Kusiara.
2. Empty Kusiara
3. Oval-shaped original Kusiara

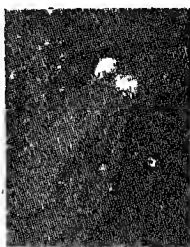
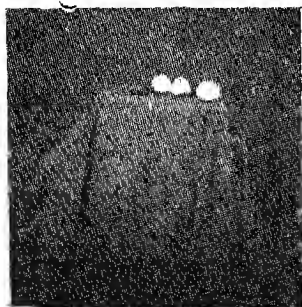


FIG. 2. From left to right .

1. Empty Kusiara from which the Kusiara butter-fly has just come out after cutting it.
2. Kusiara butter-fly near the empty Kusiara.

FIG. 3. From left to right .

1. Just below the Bournvita can the Kusiara butter-fly is seen climbing.
2. Just below the Kusiara butterfly, an empty Kusiara from which the fly has just come out.

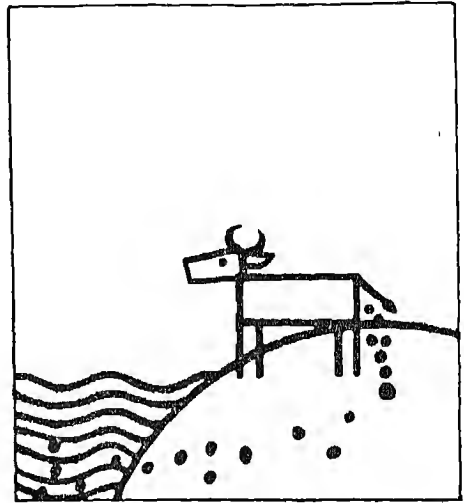
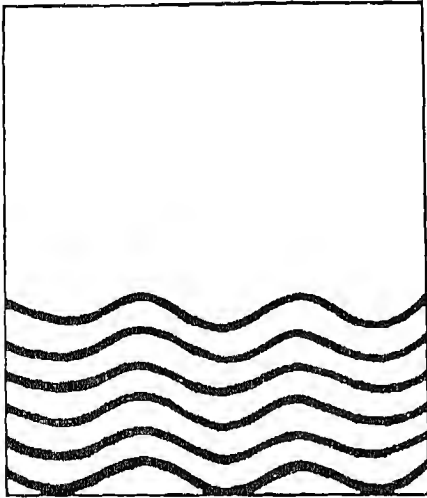


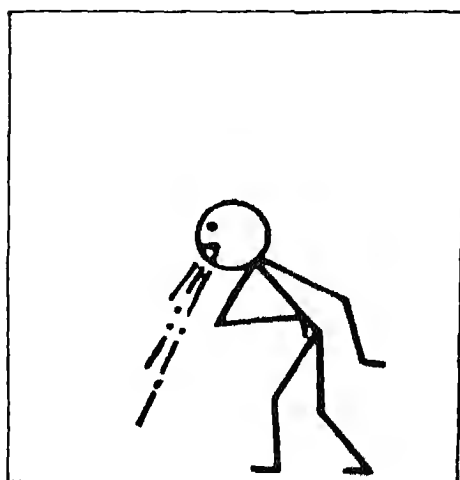
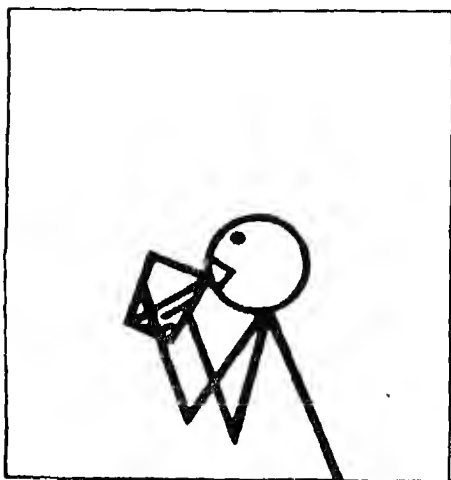
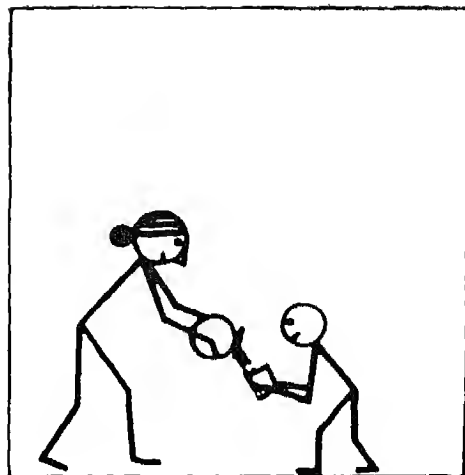
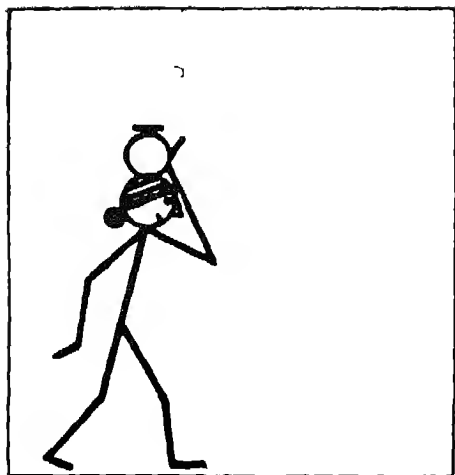
Health Education Story Through Matchstick Drawings

ABHAY KOTHARI
RAMESH KOTHARI

With matchstick drawings an imaginative teacher can bring use to the blackboard drawings.

Several times we have presented ideas through this technique. Many a time people feel that matchstick drawings are good for one idea or action only. And it would not be possible for us to present a story through this medium. With matchstick





drawings one can easily develop a series of situations which ultimately can be woven into a continuous story.

Health Education

Story on Dirty Water

Here we have given an eight-situation story about water and how it gets dirty and harmful. Each situation is simplified to a great extent and only the essential elements are depicted in the drawing.

One way for a teacher to use

this story would be to develop a situation on the board as the discussion develops and another way would be to bring in previously prepared drawings.

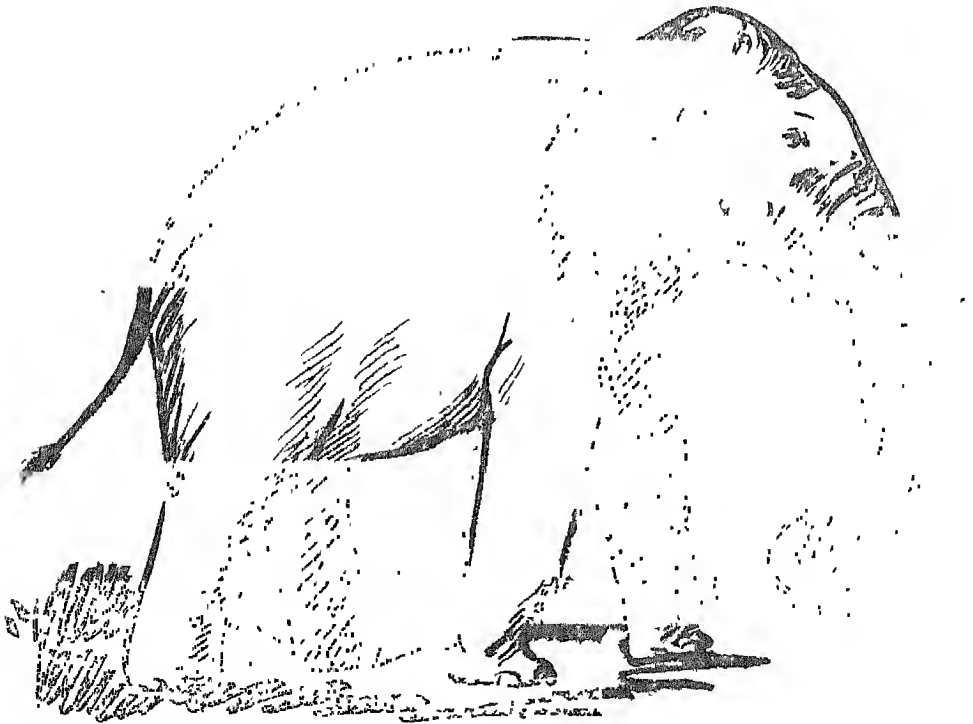
Once the teacher gets the feedback from her first experience, she can finalize the drawings for next presentation. The blackboard experience can also be utilized for developing flash cards.

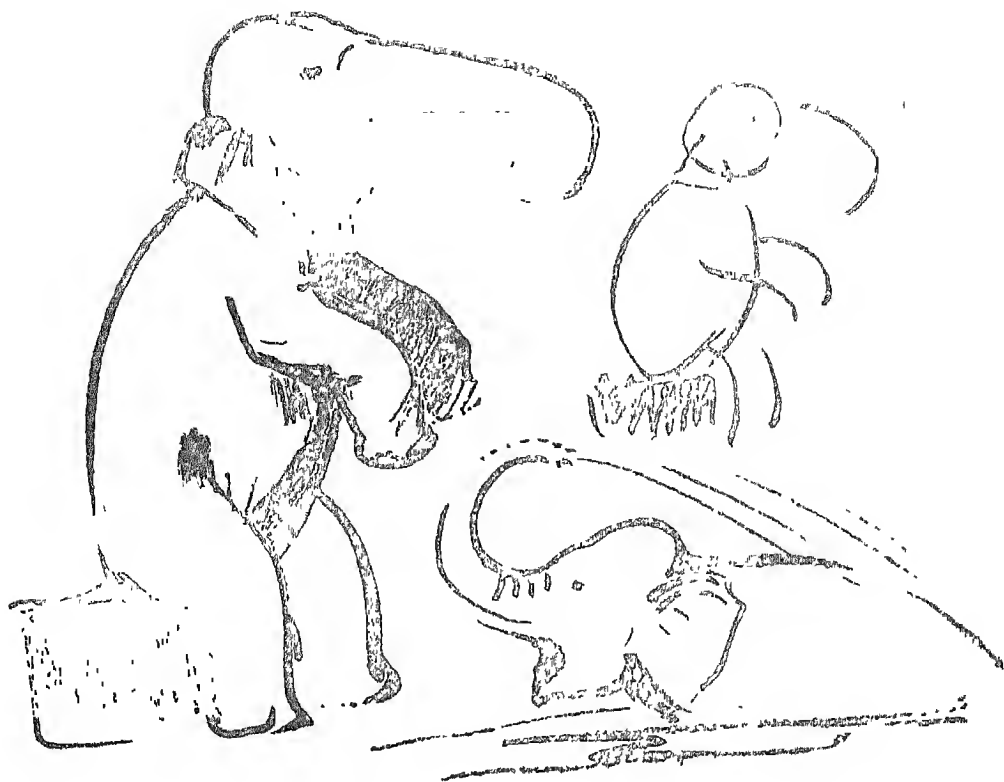
Good Rehearsal is a Secret of Good Matchstick Drawing Presentation

The Elephant

How to Draw it

ELEPHANT is a very big animal. Children enjoy watching it. They would like to draw it too. Instructions have been given below for them to follow. Children, you need no colours to draw it. Should you choose to put colours in it, you may do so inside the pencil outline.



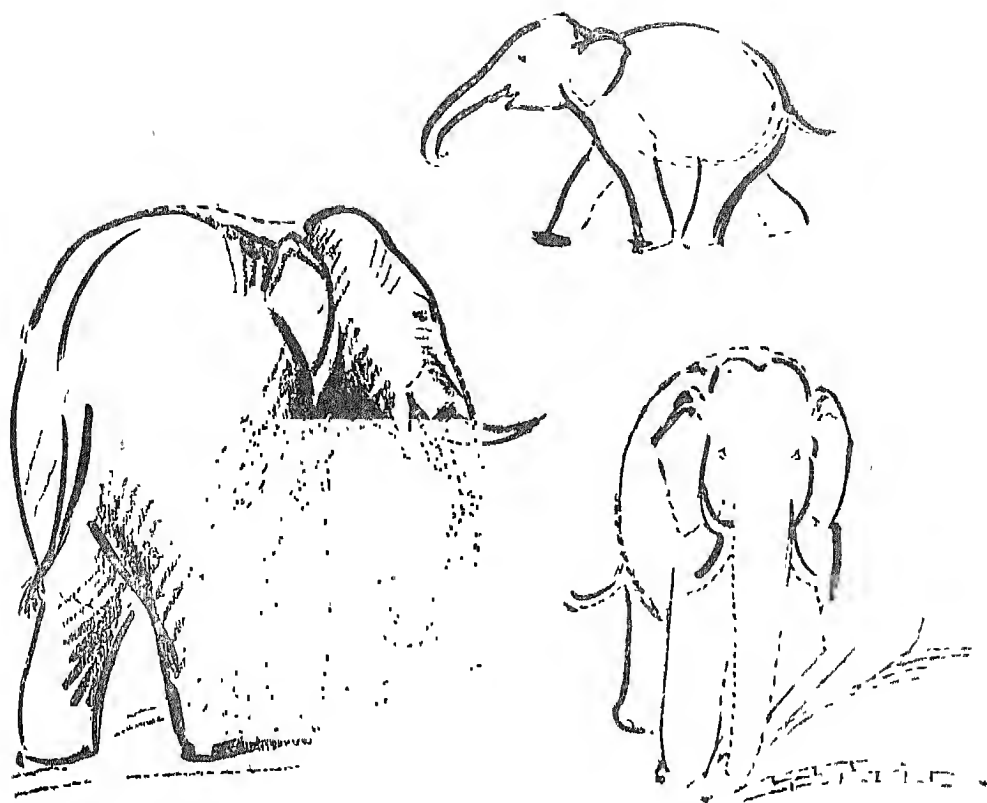


You must have seen an elephant in circus. The elephant taking bath in a river is quiet a sight. We now tell you how to draw it.

Draw an oval-shaped circle. This would be the body of the elephant. For his front, draw another small circle.

Draw a curved line coming out of a small circle. For legs also, draw two lines as shown in the drawing. The elephant has large ears. Draw these also. You can now draw a sitting elephant, a bathing elephant or an elephant on the run.





All these instructions pertain to the drawing of the body. Now you can draw an elephant more clearly and attractively after seeing all these drawings. You would love to make them.

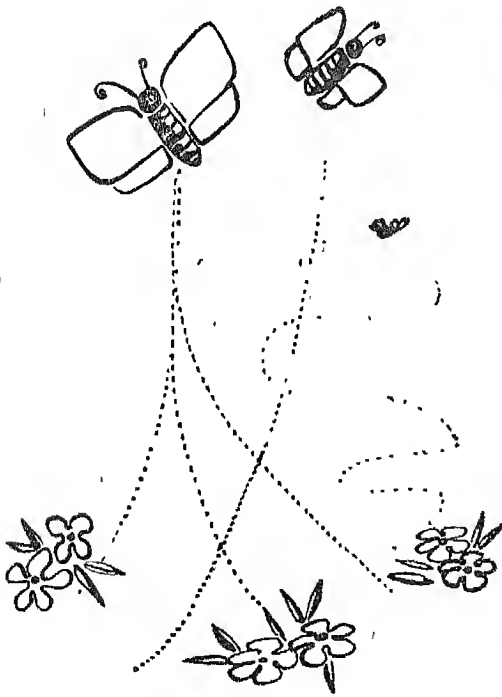
TEACHERS WRITE

Frightened Child and My Experience

A CHILD of Class I had become a headache for me. It was not that he was very naughty; in fact, he was extremely calm and quiet. He used to sit tight-lipped and merely stared at others. As far as the class work was concerned, either he would not do it at all or if he did it his pace was extremely slow. Whenever I asked him to do something he would start crying. He had all my sympathy. At first I thought it was none of my responsibility but as a conscientious teacher I did not approve of the idea. The child who must learn, must be active, jolly, sports loving, should not sit as though he had no brains. I tried to find ways of effecting changes in him but without any success. After a couple of days I passed his way. This calm and quiet boy sitting in a corner was trying to open the tiffin box. Another naughty boy of the class tried to grab it. In the regular class also this naughty boy used to sit by his side. As soon as the naughty boy saw me, he left that place and crossed over to the other side to play elsewhere.

I went to the problem child. In the beginning the child was a little scared of me, but perhaps my smile gave him some confidence. I chatted with him about his tiffin, his dinner and other things. I was surprised to see that the boy was gradually changing. I could not quite believe that he was the same boy.

The first thing I did in the



class was to change his seat. I asked him to sit in the front row. Next day the child worked a little faster and more carefully than before. I praised him and wrote "Good" on his exercise book. Then I noticed that sometimes this boy addressed me 'Uncle' as well. Now no student of the class dared tease him anymore.

Then came the time of co-curricular activities. I narrated the story of the birth of Lord Krishna. When I asked the children who would narrate a story, the same child came forward enthusiastically and told the story of Dhruva very nicely. He mentioned that he had heard a number of stories from his grandmother and remembered them. Today he is matured into a good student of our class.

UDAI PRAKASH SINGH
Primary Teacher
Central School
Babina Cantt
Jhansi



Child Delinquency

SOME CHILDREN commit more crimes than others during their youth. They are very notorious and do not obey their parents. They beat their playmates and classmates, commit thefts and damage public or personal

property.

Such children become a problem for their parents. No matter how much scolding they get from their parents they seldom, if at all, improve. Studies on this subject have shown that such children are mostly the neglected ones. They are physically handicapped. Some may have only one eye or very defective eyesight, while others may be a little deaf or may stammer, or have defective limbs. Therefore, their parents, siblings, teachers and classmates consider them to be inferior. Usually, the dark child is looked down upon as compared to the fair child. Idiots or imbeciles also get the same treatment. In some cases step-mothers, step-brothers and sisters are also the cause of this neglect.

The child is sensitive by nature. He comes to know immediately that he is being neglected. He gets hurt when he realises it. As a result of this he wants to attract others. Usually, he does not succeed in doing so which makes him suffer from inferiority. Psychologists call it 'Inferiority Complex'.

This inferiority complex makes the child restless and thus he exhibits a strong desire to attract others. Since he cannot meet his desire in a natural manner, he starts compensating it by his extraordinary behaviour. This extraordinary behaviour can be either constructive or destructive. Some people suffering from inferiority complex become great. Socrates, Napoleon and Chanakya are a few

such examples. But this number is always very small, say one in hundred. In most of the cases such children start indulging in destructive acts and succeed in attracting others. They derive satisfaction from it.

Such children who become delinquents in the beginning of their life remain delinquents all through. This is bad for themselves as well as for the society. All the neglected children want recognition. They also want to be listened to and expect love from parents, teachers and friends. If they get all this, there is no reason why they should become delinquents. Even the most notorious child pays respects to one particular person in the family and not to others. The reason is that this particular person, though he does not do anything for him, listens to him carefully and has sympathy for him. Others hurt him by neglecting him all the time. As a result, he suffers from inferiority.

Since I am working as a career master, parents bring their problematic children to me. Once, one boy was brought to me. He was very destructive. The child was good-looking and did not have any physical defect. But during the conversation I came to know that among the three brothers he was the middle one. The eldest child helped his father in the business, so he was important. The third being the youngest was the parents' favourite. The whole case was now very clear. The parents

action according to my advice and were sympathetic towards him in their behaviour. After some time, the child became a normal child.

HARI SHANKAR SHARMA
Science Teacher
Government Secondary School
Khirani
Sawai Madhopur
Rajasthan



Towards Being a Good Teacher

BE IT in a primary or secondary school, every teacher needs to understand the importance of homework to make classroom teaching effective and meaningful. In that, the load of homework has to be in accordance with the student's age and class in which he studies. By nature children cannot sit at one place. They like to play and hop around most of the time. So the teacher has to devise ways and means either to divert their attention from play towards studies or to adopt the activity approach in teaching. And this needs to be done right from Class I so that the child may gradually develop the habit of learning through playway activities. Time distribution in respect of primary school students could be

somewhat as in the table below: behaviour earns him the students'

Class	Student's approx. age	No. of subjects taught	Approx. school (hrs)	Approx. rest (hrs)	Time for play, meals (hrs)	Approx study (hrs)
I	6	3	5	10	7	2
II	7	4	5	10	7	2
III	8	6	5	10	6	3
IV	9	6	5	9½	5½	4
V	10	7	5	9	5½	4½

Depending upon the availability of study hours to students at their homes as indicated above, the teacher may assign them home task in the manner shown below :

Class	Reading (hrs)	Writing (hrs)	Other tasks (hrs)
I	¾	¾	½
II	¾	¾	½
III	1½	½	1½
IV	1½	½	1½
V	2	½	2

While giving home task, the teacher has to keep into consideration that the student may be able to do it on his own. It is observed that sometimes the home task is so difficult that the student is unable to do it by himself. Thus, he may need somebody's help to do the homework assigned to him. The problem arises when nobody in the family is educated enough to help the child in this task. Therefore, before assigning homework, the teacher should always explain everything to the students so that they do not face any problem in doing it independently. This, in fact, is one of the most important tasks of the teacher. Besides, he has to create the necessary interest among the students for completing their homework.

Another point worth mentioning is that the teacher's good

respect and makes them obedient spontaneously. The teacher should always go to his class with a smiling face so that the students are not afraid of him and that they develop respect and love for him. He should always go to the class well-prepared and should teach properly. He should ask relevant questions in between and encourage the students to answer these questions to seek their active involvement. And if he gives them some questions to be solved at home he should explain these fully.

It is possible that only a few students may give right answers while many others may answer wrongly. The teacher should not punish the students who have wrong answers or those who do not even attempt to solve them.

May I, in this context, relate a critical yet true incident of how uncalled for punishment affects a child's mental growth and develops in him a sort of fear complex.

A certain physical education instructor was always in the habit of getting angry and being harsh with his students even at their slightest lapses. He rejoiced at seeing the poor young children shiver with fear. As a result, the children developed fear complex and lost their self-confidence.

One day in a physical exercise test when the students were standing in a queue, the teacher shouted in his angry pitch that if any child did not know the exercises he should come out of the queue, otherwise he would not be spared. Fearing the worst, a few simple and innocent children just came out, although everyday they used to do their exercises well. Thus, because of the fear complex and the resulting lack of self-confidence they could not pass the test. Obviously, the situation would have been different, had the teacher not behaved the way he did.

This incident does leave a lesson. The teacher, at whatever school level he may be, should avoid getting angry or harsh with his students lest they should altogether lose their self-confidence out of sheer fear. He should explain everything to the students very patiently, lovingly and sympathetically and thereby try to develop in them a sense of confidence and fearlessness.

Sometimes the teacher can inspire the weak students by comparing them with the bright ones. He should help them overcome their weaknesses and develop in them interest for studies. If the teacher is tactful and sympathetic, he can get a very good response from the class and achieve very high standards. This doesn't mean that the teacher should never punish the students. Their mistakes must be pointed out at the right time and in the right manner.

The teacher must always see that he maintains discipline in the class and that the students give due respects to him. For this the teacher has also to discipline himself. He should never indulge in activities like smoking in front of his pupils, asking them to fetch *paan*, *supari*, cigarettes, etc., for him.

A good teacher is one who develops rapport with his students and earns their respect. He narrates stories or incidents with good morals to his pupils and encourages them to narrate similar ones in return. He behaves like a good friend. His pupils never hesitate to come to him for any help or guidance. This leads to the overall mental and social development of the student and that's the real aim of education.

M. D. PANDEY
A-6/SBM Colony
Najafgarh Road
New Delhi



Education and Society

IN COMMON parlance education means book-learning in schools and other institutions. According to this school of thought, education looks pretty one-sided and also restricted in scope.

If education is evaluated from

the standpoint of educational philosophy, its scope is wide. Education leads to allround development. Education is a life-long process. A child starts learning from birth. As he grows old, the scope of his education gets gradually widened. He, while climbing the ladders of life, builds his future with the proper support of society.

Besides education, geographical and social environment also influences the child greatly in his allround development. At the time of birth, the child is but a bundle of flesh and should he not receive any support from society he would be no more within a couple of hours. His future behaviour is determined by his early education and social support. Several children have been seen to behave like animals because of their early association with animals.

The problem as it exists today is how to coordinate education with society so that the pace of educational development becomes faster. It is, therefore, necessary that schools be set up in healthy surroundings within the socio-geographical limits. A child by nature explores everything and, being impressionable, learns quickly from the environment.

Coordination between education and society is possible only if teachers invite parents from time to time and discuss with them their ward's progress. This would establish a close relationship between the school and the home. Home is the first school for the

child and it is here that he should be given moral training. Before a child is sent to a formal school, he should be provided proper early education. Mothers play a big role in the early education of children.

If children are to treat schools and homes alike and have devotion for them, teachers have to make schools welcome places for them to come to.

PARVATI LAL
Assistant Teacher
Primary School
Ratansa, Jhansi



Child's Third Eye

THE THIRD eye of the child is something whose description is not easy. Even if one tried, no theoretical interpretation would be possible. Only experience and right action could yield the correct perspective to a person trying to find an answer.

Parents are not necessarily acquainted with it. Only that person who plays with them like a child and walks with swaying feet with them could have some experience of the third eye.

A child sees objects in his neighbourhood with his two eyes. He reacts to them according to his age, experience and mental state. A child in his innocence,

along with a piece of bread, could as well put an insect into his mouth. He has an idea of what to eat and what not to eat but he is incapable of taking a decision like the adults. He acquires this ability after the third eye of his inner intelligence is opened.

A child will remain a child all through his life if the environment did not have any influence on his being. The third eye means the inner light of the intellect which keeps one ahead of others in all departments of life. Primary teachers have an opportunity to light these inner lamps. Without an analysis of the inner being, sheer consciousness is meaningless.

How to Analyse

A child is ignorant when he enters the school and while lighting the inner lamp one sees several forms of this reality.

Class I

Here ordinary games are played which do not require any elaborate training. In the field of learning, a child starts with 'A for Apple'. In this class we could learn about the direction he would take. One has to forsake using standard language and take recourse to dialect. Children should be so encouraged and their curiosity so roused that they shed fear of the teacher. Imaginary stories, playing with kneaded earth and ordinary games could help a child reach the ultimate in knowledge.

Class II

Slowly the child develops

consciousness. His activities remain at the same old level. A story beginning with "Once upon a time" kindles light in him. In such stories the child ought to be told about the characteristics of the king. It is sufficient to tell that he was rich. He had a crown. The contrast between his pomp and show and the poverty around him must also be indicated.

Class III

The concept 'The earth revolves round the sun' leads to several conflicting questions, e. g., why does not our own house revolve? This problem should be met with the help of material aids. Interpretations and information about relevant issues would help children learn the direction in which they must move.

Class IV and V

By the time children reach Standard IV or V they become responsible and competitive. A child realises the value of education. Failure and success keep him alert and conscious of the external reality. By now the child learns when to stop, what is a standard language, play-way method, etc.

The golden future lies hidden in the children. It is for us teachers to help realise it.

M. L. MAURYA
Primary School, Daulatpur
Mahmudpur, P. O. Valya
Jagdishpur, Tanda

THE PRIMARY TEACHER



International Year of the Child (IYC)

ON 21 December 1976, the General Assembly of the United Nations passed a Resolution declaring 1979 the International Year of the Child.

The UNO, by placing the child in the centre of the world attention, invites the world community to review and re-affirm its concern for the present condition and the future of its children.

The Purpose of IYC

The International Year of the Child is concerned with all children in all countries, especially young children. Its major aims are to :

- encourage all countries, rich and poor, to review their programmes for the promotion of the well-being of children, and to mobilize support for action programmes according to each country's conditions, needs, and priorities;
- heighten awareness of children's special needs among decision-makers and public;
- promote recognition of the vital link between programmes

for children on the one hand, and economic and social progress, on the other;

- spur specific, practical measures—with achievable goals—to benefit children, in both the short and long term at the national level.

Summary of the Declaration

The Preamble states that the child, because of his physical and mental immaturity, needs special safeguards and care, both before and after birth, and that individuals and groups should strive to achieve children's rights by legislative and other means. Mankind, it says, owes to the child the best it has to give.

In ten carefully worded principles, the Declaration affirms that all children are entitled :

- to affection, love, and understanding;
- to adequate nutrition and medical care ;
- to free education;
- to all opportunity for play and recreation;
- to a name and nationality;
- to special care, if handicapped;
- to be among the first to receive relief in times of disaster;

- to learn to be useful members of society and to develop individual abilities;
- to be brought up in a spirit of peace and universal brotherhood;
- to enjoy these rights, regardless of race, colour, sex, religion, national, or social origin.



Did U Know..... ?

THAT ALL urban areas have facilities for elementary and middle school education ?

That in rural areas 80 per cent of habitations have a primary school within 1.5 km and over 60 per cent of the habitations have a middle school within 3 km ?

That it is estimated that out of a total of 575,926 villages in the country, 48,566 are not served with any school at all ?

That in 12 states and union territories, education is free for all children up to the secondary school stage ? In eight other states education is free for all children up to the middle school stage but as additional incentive this continues for a few more years for girls only ?

That two states offer free education for all children up to the primary school level and one of these continues this privilege for an additional few years for girls only ?

That out of every 100 children who enter Class I, less than half

complete Class V and only 24 complete Class VIII ?

That the dropout rate for girls is much higher and out of every 100 girls who enter Class I, only about 30 reach Class V, i. e., 70 per cent of girls who ever get enrolled in schools drop out before attaining functional literacy ?

—a small voice



Focus on Deprived Children

India focuses attention on 'Reaching The Deprived Child' in 1979 the International Year of the Child (IYC) A national plan of action for the purpose has been drawn up by the Centre as part of the IYC, as per the news feature of Press Information Bureau.

INDIA'S CHOICE of the theme for the year is very apt because four out of every ten persons in the country are children (below 14 years). In a total children population of 230 million, 92 million are estimated to be below the poverty line.

A peep into the children population data reveals several disturbing features. Of the 230 million children, 115 million are in the vulnerable age group of below six years. 81 per cent (that is, 187 million) live in rural areas, where infant mortality rate is higher. Malnutrition is considered to be the dominant behind-the-scene cause of children's death and disability. According to a survey by

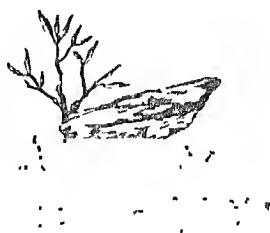
the Indian Council for Medical Research, at least 60 per cent of all children below six years suffer from diseases arising out of malnutrition.

The problem of catering to the health and nutrition requirements of children can be looked at from the broader but relevant angle of maternal and child welfare. Women in 15-45 age group comprise 22 per cent of India's population. When this datum is combined with the children population (below 6 years), this segment would constitute 43 per cent of the population. Meeting the health and nutrition needs of this large section is a gigantic task.

The Universal Children's Day

on 14 November this year will be utilized to highlight the health and nutrition needs of the children and the steps required to meet them.

The national plan of action for the IYC will be coordinated by the National Children's Board, headed by the Prime Minister. The Board has resolved to set up a children's fund at the national level and similar funds in the states. These are to be used by voluntary agencies for extending child welfare services. Rehabilitation of destitute children and services to the children of scheduled castes and tribes and of backward classes would be given priority in using these funds.



SCHOOL SCIENCE

A QUARTERLY JOURNAL OF SCIENCE EDUCATION

Published by the National Council of Educational Research and Training, *School Science* is a quarterly journal of science education.

School Science is an open forum for discussing science education in our schools, its problems, prospects and individual experiences of teachers and students.

Besides the educational aspect, *School Science* contains a stimulating feature—Science News, which introduces the frontiers of science to the teachers and the curious students. Among other regular features, *School Science* presents profiles of famous scientists. Julian Huxley, T.R. Sheshadri, Amedeo Avogadro, Jacques Monod, Lev Landeau and Werner Heisenberg have so far been covered.

We invite the practising teachers and their students to present their problems and findings in the pages of *School Science*. There is a section reserved for the students, where they can communicate with teachers and students in other parts of the country.

School Science, you will notice, is meant both for the teachers and their students. It is meant to make learning and thinking a joyous process. And the most important thing is your participation in it.

JOURNAL OF INDIAN E D U C A T I O N

The *Journal of Indian Education* is a bi-monthly periodical published by the National Council of Educational Research and Training, New Delhi.

The purpose is to provide a forum for teachers, teacher-educators, educational administrators and research workers, to encourage original and critical thinking in education through the discussion of current educational views, and to promote the development and improvement of educational practice. The contents include articles by distinguished educationists, challenging discussions, critical analyses of educational problems, book reviews and other features.

Manuscripts sent in for publication should be *exclusive* to the *Journal of Indian Education*. They should be in duplicate, typed double-spaced and on one side of the sheet only, addressed to the General Editor, *Journal of Indian Education*, Journals Cell, NIE Campus, Sri Aurobindo Marg, New Delhi-110016. Contributions accepted are paid for on publication.

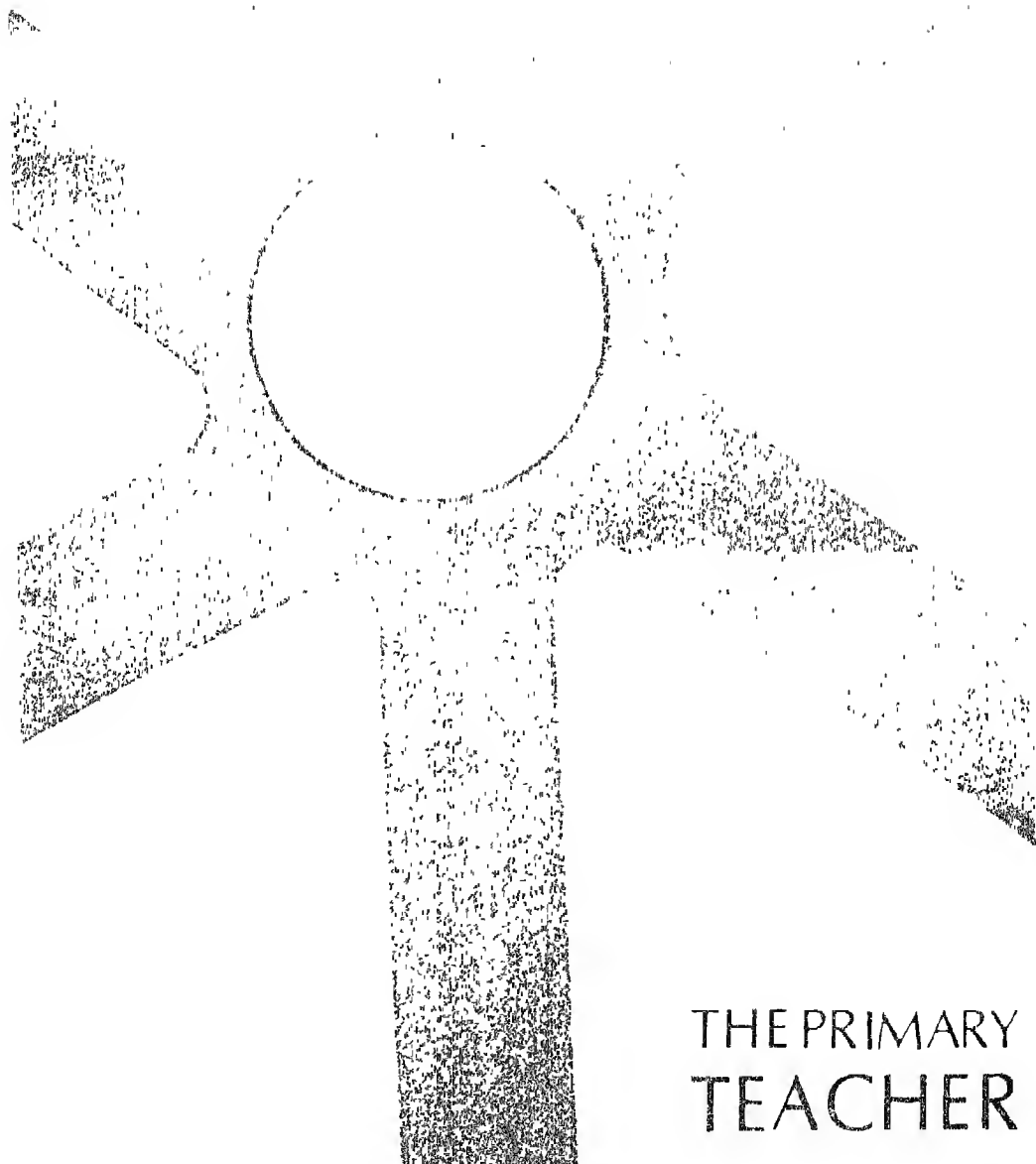
The views expressed by individual authors are their own and do not necessarily reflect the policies of the Council.

Copyright of manuscripts published in the journal will vest in the NCERT and no matter may be reproduced in any form without the prior permission of the Council.

Published by V.K. Pandit, Secretary, National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi-110016, and printed, at Everest Press, 4 Chamelian Road, Delhi

General Editor : Prof R.P. Singh





THE PRIMARY TEACHER

Vol IV No 2 APRIL 1979

The Primary Teacher is a quarterly brought out by the National Council of Educational Research and Training, New Delhi.

The journal intends to give to the practising teachers and concerned administrators authentic information about the educational policies being decided on and pursued at the Central level. It aims at giving meaningful and relevant material for direct use in the classroom. It would carry announcements of programmes, courses of study, etc., offered at various centres in India from time to time. It also provides a forum for the discussion of contemporary issues in the field of education.

The major features of *The Primary Teacher* are :

1. The educational policies concerning primary education
2. Questions and answers
3. States round-up
4. Illustrated material for classroom use

Subscription : A copy of the journal costs Re. 1 00. Annual subscription is Rs. 4.00.

Contribution : Articles and papers written by school teachers either in English or in Hindi are welcome. Each published article would be paid for. Two typed copies of the article should be sent in for consideration.

The paper used for the cover and text of this journal is a gift from the Unicef

General Editor : Prof. R. P. Singh

Academic Assistance : D. N. Khosla

Production : C. N. Rao
Chief Production
Officer
• Kalyan Banerjee
Production
Assistant

Editor : S. K. Malhotra

Editorial Assistant : Archana Sood

Artists : Wagh
: C. P. Tandon



Please send your subscriptions to
Business Manager
Publication Department
NCERT, NIE Campus
Shri Aurobindo Marg
New Delhi-110016

THE PRIMARY TEACHER

Vol. IV No. 2

NATIONAL INSTITUTE OF EDUCATION
LIBRARY & DOCUMENTATION

Unit (N.C.E.R.T.)

Acc. No J-5884 ...

Date 8-3-1982 ...

April 1979

EDITORIAL

The Primary School Teacher—An
Instrument of Social Change

Qamar Uddin ... 3

Educational Approach to a Deprived
Child

Pramila Pandit Barooah ... 5

Child and Art Education

R. K. Chopra ... 10

Inculcating Discovery Attitude in
Pupils Through Arithmetical Recreations

N. Subhramanya ... 15

Developing Reading habits
among Children

R. S. Sharma ... 19

The Primary Teacher and the
Handicapped Child

B. N. Kaushik ... 23

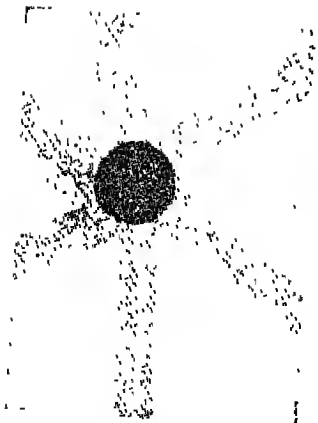
TEACHERS WRITE

NEWS & VIEWS

... 27

... 30

... 36



Cover Design : Kalyan Banerjee

॥ श्री गुरुभ्यो नमः ॥
॥ श्री गुरुभ्यो नमः ॥

We invite our readers — the primary teachers — to contribute to our journal. We are interested in pictorial features and illustrated articles written by the practising primary teachers. The articles / features, clearly typed out in double space on one side of the paper only, should be sent to the General Editor, *The Primary Teacher*, Journals Cell, NCERT, NIE Campus, Sri Aurobindo Marg, New Delhi-110016.

A CHILD AND THE NATION



CHILDREN ARE the biggest asset of a nation. They have in them all possibilities of achieving their potential. They are curious by nature and want to learn about their family, environment and the relationships of one with the other. Their curiosity ranges from trying to learn about grass, flowers, bushes, hedges, ponds, rivers and the galaxy. Their flight of imagination is such that even the best of an intellectual would not be able to match it. They put questions in a manner which it is not possible even for an encyclopedia to cover. It is extremely difficult for a teacher, no matter how clever or well prepared he is, to satisfy the curiosity of these children. The success of a teacher, therefore, depends largely on exciting their curiosity, converting the same into auto-teaching and also discovering ever newer things.

In the classroom, teachers feel satisfied if they are able to provide guidance to the children, give them assistance to learn what is written in the books and explain the curricular material within a given framework. The role of the modern teacher is both difficult and complicated. He has not only to meet the requirement of a time-table, prepare himself well before coming to school, be a social leader, but has also to perform the duties of Mr. Know-All. In view of the increasing importance of the adult literacy programme, the teacher may be called upon to assist in this national endeavour also. While we acknowledge that this is his duty to his nation, he must also take into consideration the requirements and the needs of the children. What we make of the child today, so shall we inherit the nation tomorrow. A child with whetted

curtiosiy is a great asset because as he grows up he may one day become a scientist and resolve our technological problems or become an explorer and unravel the mysteries of the universe or become

a thinker and lead the nation in a completely unthought of direction. Today's child would then hold the key to the destiny of tomorrow's nation.

□



QAMAR UDDIN
Lecturer, Examination Reform Unit
NCERT, New Delhi

IN EVERY age, right from the unrecorded historical period of ancient India, the teacher has played a very significant role not only in imparting traditional education to the students but also in bringing about a change in the thinking of the people at large. In the ancient period of Indian history he was called the *guru* and was universally respected. He was considered the ideal of sincerity, truthfulness, courage and such other qualities. He devoted his whole time to the well-being of the pupils he taught.

The pupils, in turn, gave the *guru* the highest respect and the utmost regard. The *guru* never thought of any material gain in lieu of what he imparted to his *shishya*, while the *shishya* tried to sacrifice even his most precious

possessions to carry out the instructions of the *guru*.

The Teacher-Student Relationship

With the beginning of the medieval period of Indian history the Muslims brought with them a system of education which was different from the existing one and new to the Indian situation, but with the passage of time, as a result of close contact of the Muslim teachers with the Indian *gurus*, *rishis* and *sadhus* and the intermingling of the Hindu and Muslim masses, they developed the same kind of relationship between the *ustad* and the *shagird* which characterised the relationship of the *guru* and the *shishya*. As a result, in one way or the other, the healthy relationship of the teacher and the taught continued.

In the modern period, the advent of the Europeans brought about a tremendous change in the entire system of education in India. With this change the teacher-pupil relationship, the teacher's attitude towards his profession, his attitude towards worldly gains and the pupil's as well as parents' regard for the *guru* did not remain unaffected. Fortunately, however, the so-called light of western education could not fully reach our villages where there were some *pathshalas* and *madarsas* and where the relationship of the teacher and the taught was based on nothing but sincerity of purpose. Many of us who have had our education in rural schools can easily recall the simple

guru dressed simply, who, irrespective of his social status and economic condition, taught his pupils even at night under the light of a kerosene lamp without the least intention of getting anything in return for the noble cause he was doing. Thus, the introduction of western education and the influence of western culture could not bring about any major change in the educational set-up of rural India. The Indian village teacher continued to exert more or less the same influence on his pupils and the parents as did his predecessors.

Attitudinal Change

However, as a result of rapidly changing social conditions, economic pressures for a better standard of living and changing attitudes under the pressure of the emerging western culture, the teacher, to a certain extent, became comparatively conscious of his wages as compared to his work. His attachment to his job and emoluments became stronger than his care for the welfare of his pupils. He started looking for better opportunities in order to raise his standard of living. And it was but natural. He, after all, was a part and parcel of the society he was living in and had to compete for a better position in his family, community, and society. This, to some extent, adversely affected his devotion to his profession as a teacher. But, in spite of this, his role in the development of the individual's personality remained decisive.

Even today, the rural parents' faith in the teacher is unflinching. To some of the rural parents it is sufficient that their child goes to school. They do not know, nor do they care to know, how and what their child is taught. The school teacher is to them all wise a person. They have the highest respect for the *guru* of their child. They have the highest faith in his capabilities and in his sincerity for the betterment of the child. They do not know the destructive effects of corporal punishment to the child and hand the child over

to the teacher by declaring . 'Guruji, take him. teach him, from today only his bones are ours and the flesh is yours.'

A Sole Guide

On the other hand, to the innocent child, the teacher is the sole guide who is his only torch-bearer and whom he tries to copy. He follows the example set by the teacher and not the precept. It means that what the teacher does goes home to the child more easily and more deeply than what he



says. It is, therefore, the genuine love for the children entrusted to the care of the teacher and genuine faith in the importance of the contribution of the teacher, that would bear more fruitful results.

This deep impact of the teacher on the parents as well as the child can play a useful role in bringing about social change. He is, no doubt, the key person in the whole process of education. The responsibility of the primary teacher in shaping the life of the child is greater than that of the supervisors, secondary school, college and university teachers. In fact, he alone has to play basically the key role in bringing up the right kind of citizens. Thus, if one really wants him to effectively serve as an instrument of social change, it is necessary for the society not only to concentrate on improving his economic status but also provide him with opportunities to keep himself abreast with the recent developments, researches and innovations in education. He should get orientation in the content as well as methods of teaching and other related aspects. He should get more opportunities of meeting people belonging to other professions, regions and faiths. In the classroom, the teacher should closely observe his pupils, their inclinations and their capabilities. He has to pay individual attention to his pupils in order to guide them in the right direction. His inspiration to, and understanding of, the child's mind will work more than his instruction. His main work, therefore, should be to evolve a programme for each

The teacher alone can create in the child a high sense of patriotism, responsibility, self confidence, cooperation, self-discipline and dignity of labour.

pupil, in accordance with individual needs of the students, with sympathy, understanding and patience. The teacher has to set an example of social equality, treating all the children equally, irrespective of their economic status, social background and religious faith.

As primary education lays the real foundation for the development of the complete personality of a child, the role of the primary teacher becomes all the more important. Therefore, it becomes absolutely necessary to select and appoint very competent teachers, who have real love for children and who feel proud of their profession. It must be made sure that they do not adopt this profession out of the pressure of unemployment. Steps should be taken to widen the horizon of the teachers' knowledge through different sources. This becomes all the more important as the children consider their teacher as their sole guide and his conduct, behaviour, attitude towards life and moral and social values leave a lasting impact on them. They consider the teacher as their only ideal and follow him in all respects as is corroborated by Rabindranath Tagore in his *Jivan Smitri*. He says, "I have found that children learn more quickly the attitude of the teacher than the knowledge imparted by him. I learn about all the injustice,

impatience, anger and partiality underlying the process of instruction, more easily than my lessons.”

The teacher has to be creative and should possess a positive attitude towards the development of the child's personality. It should be clear to him that education is not merely imparting factual knowledge of the subjects to the children in order to prepare them for the next grade. It is much more than that, i.e., preparing a complete personality with development in all the spheres of life. It is making the child a good citizen of his country, a good member of his family, a good member of the society, a good friend and a good neighbour. It is

the teacher's behaviour which can develop in the child a high common sense making him aware of the fact that even the most insignificant act of a person can do a great good or harm to others. The teacher alone can create in him a high sense of patriotism, responsibility, self-confidence, cooperation, self-discipline and dignity of labour.

Thus, if education can be engineered to be an instrument of social, economic and cultural change, it is only through the competence of the teacher, his integrity, his intellectual understanding, his complete personality and not his academic brightness alone. □



Educational Approach to a Deprived Child

PRAMILA PANDIT BAROAH
Indian Council for Child Welfare
New Delhi

Who can think of India without thinking of Mahatma Gandhi. India, so ancient a land, yet kept young in search of the modern nationhood, that Gandhi was leading .Bharat Mata, the Mother so very old, and yet somehow eternally youthful, calling on her children to cherish her.

WITH a major population increase, India today is transformed into a society where children and youth are in majority and the destiny of the nation will depend, as never before, on their health and education. We all know that the challenge to protect and educate the children will remain unfulfilled for many years to come, but we could do more to meet the burdens by checking all our programmes to see to what extent they bring the maximum resources to bear on the health and education of a nation's children and youth. This challenge is not merely for the government. Planning for children and youth is supremely a shared responsibility, between government and non-governmental institutions, local communities and individual families. Parents and grandparents, looking at their own progeny, can see

in them a microcosm of the nation's most precious assets. All of us can share in discussing how best to give these, the majority of our young and future citizens, adequate health and diet, schooling and usable skills—and last but not most important, allround safety and security.

Education and National Development

Education in India is inescapably linked to national development. 'Development' means economic growth. It also means change in the structure of economy. It means adopting and adapting the way of modern science and technology; it means searching and seeking, being prone to innovation and experimentation; it means developing intellectual flexibility and creativity; it means revising, discarding and/or adapting traditional customs and accepted hypotheses; and it means that all these causes and consequences of change must be placed firmly within the framework of universal values and their particular national and local expression. Then, in development, 'growth' and 'change' must take place together as development is, in the end, a form of humanism, for its aim is and should be service to man. It is an expression of the wholeness of man, of man in his totality, serving his material needs of food, clothing, shelter and embodying his moral demands for peace, compassion and charity. Education serves to achieve the above attributes of development

and makes them a reality. But all education does not contribute to development. There is no doubt that education has advanced but only in quantitative terms, i.e., number of admissions, number of teachers trained, increase in the number of schools and universities and all this offers no basis for complacency — educational road ahead is still very long and the climb steep.

Inequalities of Educational Opportunities

There are serious inequalities of educational opportunities within the country, at the state, district and block levels. Then another inequality arises when it comes to sex; girls enrolled are very much less than boys, and it even becomes more marked in upper grades. Then the inequality is noted among urban and rural, and groups like scheduled tribes and scheduled castes. Hence the most important and fundamental question to solve the inequalities arises—Is the education offered in India today that which the country needs? We can very emphatically say, 'No'. For the education imparted to our young is largely unrelated to life and there is a wide gulf between its contents and purposes, and the concerns of national development.

Objects of Education

The Indian educational system

will continue to make its low contribution to national development unless we bring about a change in the system. It must be related to productivity; strengthen social and national integration; consolidate democracy as a form of government; help the country to adopt it as a way of life, and strive to build character by cultivating social, moral and spiritual values. These objects, unless translated into educational programmes and structures, curricula and methods, will mean that the education system in India will limp along slowly and at a very slow and low rate. There is not only a major gap in our educational system, but this finds its way into our way of life and is evident in a wide social gap between the school and the home.

Everyone, specially parents, will agree that today's education is city-oriented and geared more to produce white-collar 'Baboos'. Children are first over-loaded with books and homework, and the subjects which have very little importance in their life, since they are unrelated to their lives or to their interests. Present education does not encourage children to take initiative, make efforts or think, nor does it produce integrity of character or capability and ability to work with hands. There is a heavy migration from rural to urban areas and also a creation of slums due to city-oriented education in rural areas. We have not cared or respected the rural community, their life and their need for the right type of education.

Gandhiji felt that the needs of the children in rural areas were of primary importance as that is where 80 per cent of our people live and that is true India. He had preached that our children, especially in rural India, must have education which will suit their needs and is geared to the rural life. The *Nai Talim* preached by him was work-oriented education. It was expressed that the subjects to be taught must have practical meaning and use in a child's life expectation. Also that education in villages must keep in view the agriculture seasons and, accordingly, have timings and terms, so that it allows children's participation on the field and in home, thus helping their parents in both areas.

On the basis of the above reflections, what then is the kind of education and planning that we should have? It seems wisest to work closely with the government authorities concerned with educational policy-making, as well as parents and teachers, to achieve the following :

- (a) Children must feel they are Indian, without having to mention or write what caste they belong to.
- (b) We should evolve a system of practical education as suggested by Gandhiji. This system of education should be built into essential subjects like language, mathematics, geography, hygiene and environmental sanitation with definite periods for manual work.
- (c) Children of *Balwadis*, for

Indian education must be made practical, meaningful and related to life

example, should sweep, clean, water and tend plants, keep hands clean, learn not to throw things everywhere, etc.

- (d) Children at the primary level, for example, should keep premises, latrines clean, channel waste water in right directions, see to compost pits, take part in local small-scale industrial productions, such as a craft which normally a child would learn from his father in traditional life.
- (e) At the secondary level, hygiene and environmental sanitation should be connected with applied biology, chemistry and physics. A small and simple laboratory in every secondary school may be used by the local health technician to teach children and simultaneously provide the community with needed laboratory services for the detection of worms, dysentery, malaria and other child-killers. School children could teach communities not to pollute tanks and other water sources by bad habits. Water-borne and fly-borne diseases could be controlled by children's knowledge and participation. This should be organized through activities like the scouts and guides programmes. Practical studies at this level should include workshop techniques related to local industry, i.e., making of small

ancillary parts taught by an instructor provided by the industry; making of saleable small objects related to traditional regional crafts such as weaving, printing, carving, carpentry and teaching of simple mechanics such as repairs of radio, television, where there are cinema projectors, etc., and especially repairs required of agriculture and other implements.

Every locality and region in our country has its own local variations. The object of such educational inputs should be to make a community more self-reliant through its own children. In this way it would keep them closer to their parents' trade and profession and reduce the numbers of purely technical institutes that are costly and not necessarily effective to meet the needs of students from a wide area. Practical, simple and appropriate technology in secondary schools could utilize the services of good craftsmen, good mechanics and good technicians in the locality without displacing the children.

It is thus very important that we do something to bring about a drastic change in our education system to make it practical, meaningful and related to life. 228 million children in India are under 14 years of age. Of these, 46 million are estimated to be below the poverty line. Approximately 186 million of these live in villages and 42 million in towns and cities and also there are tribal children in the hills. We must work for them, if we want a bright

and strong nation.

Work-oriented Education

Instead of aping the West, we could learn from the experience of our neighbours in the East, who are more in our line and have struggled and found their own method and are much ahead in the world. Mrs. Baig, former President of the Indian Council of Child Welfare, visited China and gives a very practical and real picture of China's approach to its children. In this country considerable emphasis is placed on the preparation of the child for its role in the future. All work in China today is geared towards production, and is centred upon the rural commerce. Collective work is the basis of daily life. All adults work for salaries (which are small) and children, youth and old work for the community. Special tasks are set to each group. Military discipline starts automatically at an early age. They have not encouraged higher education, except for gifted science, medical and technological students, since 1966, but they have achieved 85 per cent attendance in schools and have eliminated killer diseases.

Healthy living was brought to the child through young "barefoot doctors" and insistence on local sanitation. Education in China is work-oriented. As Gandhiji insisted, subjects are reduced to the basics, such as mathematics, language, foreign language, hygiene and political ideology. At the secondary level, geography, science and technology are introduced—

but no history. Along with studies the children learn practical skills. The education is a drive towards self-sufficiency.

Although the situation in China may differ from that in our own country, there are many lessons

to be learned from their practice of work-oriented education. As elaborated above, surely India has many benefits to reap from a system of education which is geared to the needs and life patterns of a vast majority of its children. □



Child and Art Education

R. K. CHOPRA

*Lecturer in Fine Arts
NCERT, New Delhi*



THE ART of the child is a new discovery. Nobody in the past ever thought that the child is also a creative human being with his own personality and his own particular laws. It was always an adult's world and adult's art where a thing like child's art had no place. But with this new discovery, the child has assumed a new position and has become a matter of curiosity among many to understand him more intimately.

There are some very interesting revelations about the nature and the mode of expression of the child. It has come to be accepted that the child, like any adult, has an inborn desire to express himself. The things he wants to express are those which interest him and catch his fancy in his own environment. Art, being an expressive medium, grows naturally in him because it appeals to his instincts. He even explores

the use of this medium with his own efforts. In the early stages of childhood, he learns it all by himself through drawing of scribbles which he improves upon into symbols and shapes in semi-realism as he grows. Thus, his compulsion to express finds a release through art in a natural way.

In his art, it has been observed that he is extremely frank and expresses his true emotions. He even emphasizes certain things which he feels strongly in him. This tendency of the child shows that he has no prejudice or inarticulation of any kind. In the child the dividing line between the conscious and the sub-conscious is so vague that his expression of feeling becomes a queer mixture of real and fanciful. Another quality which is evident in his art is that his expressive urge is so strong that he discovers his own original ways of working and

creates art-forms to suit his purpose. These tendencies are more pronounced in his art during the period of primary school stage, when he is not yet affected by the influence of adults and he has his natural qualities intact.

This discovery of the child's art has brought about a fresh thinking in the scheme of art education. At the primary level specially, art education has borne a new meaning and purpose. It is now broadly based on the consideration that art is a quality of doing and its experience is basic to the child's creative growth. In terms of education, art has been identified as a creative activity to involve the child into having a novel experience. The activity calls upon the child to choose, to organize and to express through art in his own way and with his own effort. This brings in the child's mind, body and soul to work harmoniously and its total effect becomes an experience for him. Various aspects of an art experience come to be seen when he creates images and art-forms for his scheme or when he experiments with tools and media. These aspects are further seen when he is absorbed in the selection of objects from nature or from his own inner world where he is sensitively and emotionally involved with the things of his inspiration. The whole act of the child becomes one of organic and indivisible process until he achieves the final art work. But more than the art work, is the experience that is important because he has been feeling, sensing and creating throughout the

Art education is recognised not only a natural means of self expression but also a measure of the child's creative growth

process. These experiences in art help to improve and enrich the self of the child. He learns through the process of art to observe objects more minutely and forms their correct concepts. He learns to coordinate his senses and deduces definite meanings and values about them. He learns to plan and organize a scheme in a variety of ways and select the one which is more appropriate. Thus, he grows with a personal outlook based on his experience in art. These experiences in art, in fact, build the foundation of the child, which is the aim of education as a whole.

Keeping in view the expressive need and creative impulses of the child, a relevant scheme of art education has been introduced at the primary level in the framework of the NCERT curriculum. Educationists recognize art education not only a natural means of self-expression but also a measure of the child's creative growth. This scheme is comprised of a long and gradual evolution of this subject, based on tradition, frequent reforms, some new experimentations and something of the child psychology.

But this concept of art education quite often has divergent interpretations as a school subject. This is largely due to the difference

in the ideologies being followed by two distinctive schools of thought—the traditional and the progressive. The former school, which derives inspiration from the past, considers art education as a training for improving the faculty of sight and skill in drawing through a rigid way. The latter school, which has emerged recently, considers art education as a training for improving the faculty of creation and the faculty of deduction of the child through providing the art experience. This school believes in a creative genius in every child who has an inherent ability to express himself through the medium of art.

From these approaches, it is obvious that the aim of the former school is to prepare the child for a definite vocation in art and its other related fields whereas the aim of the latter school is to offer him the opportunities to be a creative person in any field, of learning and to lead the life in a desirable way, essentially for a good living. In recent times, the traditional school finds itself difficult to exist because of its narrow scope, but, on the other hand, the progressive school is growing in size for its bold and liberal ideology.

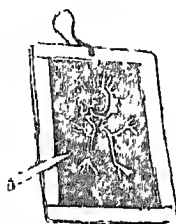
In order to know further the concept of art education as interpreted by the progressive school, it is pertinent to understand the child who has been brought into focus in evolving the scheme of this subject. An old belief of the educationists that the child is a mute being and the purpose of education is to load him with information of all sorts, has been

categorically rejected in our times. The new discovery about the child is that no doubt he is a biological entity, but he is also a feeling and thinking human being. Before he comes to school, he has numerous experiences of things and situations which he has stored up in his feelings, thoughts and emotions. These are the basic elements which he displays through his personality and he behaves in a particular way. He has the desire to express what he has learnt with his own efforts and through his percepts. At times, these become powerful drives which need release. Another discovery about the child is that he is born with certain inherent tendencies. Some of these are the aesthetic forms which manifest themselves early in the childhood. He subconsciously expresses them by way of rhythmic movements, gesticulations, humming of tunes and scribbling of art-forms. All these acts of the child become evident in his play activities. These are some of the psychological problems of the child which are valid for utmost consideration. The impact of them on art education is a natural coincidence because art has essentially been considered as a medium of expression and also because it has a close relation with the emotional and aesthetic faculties of an individual. Thus, the problems of the child's creative and aesthetic development have become the concern of art education more than any other subject.

The child at the primary stage is most creative and prolific by

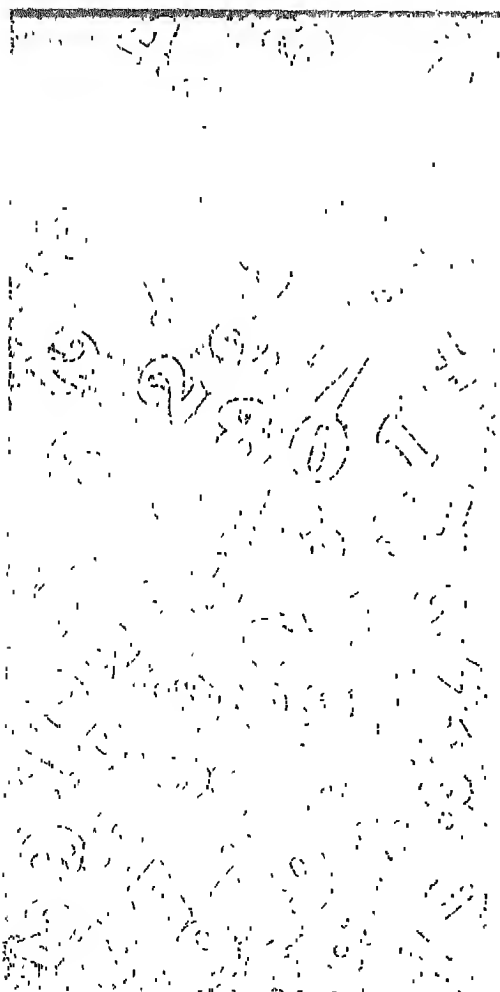
nature. This poses a challenge which has to be met, otherwise he is likely to suffer from frustration. All his abilities, attitudes and interests need a proper direction and nourishment for his healthy growth. The subject of art education now offers an

appropriate curriculum to meet his various needs. Its main purpose is to foster in him the sense of curiosity, discovery and creativity, and, in the ultimate effect, to inculcate in him the sense of aesthetic appreciation, sensibilities and finer tastes. □



Inculcating Discovery Attitude in Pupils Through Arithmetical Recreations

N. SUBHRAMANYA (SANKHYAPRIYA)



THE MAIN objective of the study of mathematics is the cultivation and discipline of mental powers. Perhaps, no other subject can serve this specific purpose, than mathematics. A suitable environment can be created in the classroom to make the pupils young discoverers.

Arithmetic is one of the oldest sciences. The Number Theory is a fascinating field. The number sense consists in the ability to recognize the various relations that exist between the numbers. The number sense can be built up among the pupils, from the beginning of the school career. Often, the number sense is absent in many who have an excellent understanding of advanced mathematics.

Mathematician of the Past

Pythagoras (580-501 B.C.) was fascinated by the Number Theory. He worked on prime numbers 2, 3, 5, 7, etc., numbers which are divisible by one and itself; perfect numbers 6, 28, etc., where the sum of all the divisors of the number is equal to the number itself; amicable numbers such as 284, 220, etc., where the sum of the divisors of one number is equal to the other. Even an amateur sometimes can make a contribution to the Number Theory. Paganoni, a 16-year old school boy, in 1866, discovered 1184, 1210 as amicable numbers. It is surprising to note that this small pair had escaped the attention of previous investigators.

These peculiar numbers are as fascinating today as they were 2,500 years ago. Almost all mathematicians, like Euclid (230 B.C.), Fermat (1601—1665 A.D.) Goldbach (1742 A.D.), and others have contributed to the Number Theory

Ramanujam (1887—1920 A.D.), the young mathematician from Madras, had a very keen number sense. When Prof. G.H Hardy visited Ramanujam at Cambridge to inquire about his health, he had to travel in a taxi, bearing the No. 1729, and incidentally he remarked to Ramanujam that 1729 was an unlucky number as it is the product of 7, 13, and 19. At once Ramanujam replied that it is the most interesting number, as it is the least number which can be expressed as the sum of two cubes, in two different ways.

$$\begin{aligned} 1^3 + 12^3 &= 9^3 + 10^3 \\ &= 1729 \end{aligned}$$

Another peculiarity about this number is that it is the product of a number of two digits and its reverse, i.e., $19 \times 91 = 1729$.

Throughout the ages, man has been interested in mysterious numbers. Numbers have a secret life of their own and are full of surprises and excitement. Any professional student of mathematics may discover a mine of hidden treasures in the Number Universe, which is seldom touched in the customary school curriculum.

Job of a Mathematics Teacher

How can we make pupils

enjoy mathematics? Mathematics teachers have a great responsibility in this regard. Their first job is to collect an adequate fund of materials from various sources and present them to the pupils. There can be no scheme of syllabus for this kind of work. It depends on the ability of the teacher to make use of the opportunity. Extra classes or leisure hours can be very conveniently used for this purpose. Mathematics clubs can arrange for such programmes. We know that children enjoy reading or listening to short stories. They take a lot of interest in them. Can we create similar enjoyment through certain recreational items in arithmetic? It is fitting and proper for the pupils to discover generalizations about number and number relations, through a process of inductive reasoning. The pupil who can discover something for himself can experience a thrill in his personal achievements.

It is learnt that Einstein's book-shelf was stocked with mathematical games and puzzles. It is authentically known that in advanced countries of the West, special periods as recreational arithmetic periods are allotted in the regular time-table for school children. In Germany, regular dramas based on mathematics are being enacted.

Recreational Materials in Arithmetic

We shall take up a few illustrations suitable to school pupils. These materials tend to create

interest in them and thus pave the way for discovery attitude.

1. The product of any three consecutive numbers is always divisible by 6.

- a) 3, 4, 5 divided by 6 is equal to 10;
- b) 9, 10, 11 divided by 6 is equal to 165;
- c) 4, 5, 6, divided by 6 is equal to 20; etc.

2. The number obtained by adding 1 to the product of any four consecutive numbers is always a perfect square.

- a) $1.2.3.4+1$ is equal to 25 which is a perfect square ;
- b) $3.4.5.6+1$ is equal to 361 which is a perfect square ;
- c) $8.9.10.11+1$ is equal to 7921 which is a perfect square; etc.

Such illustrations create curiosity in the pupils who are greatly surprised at the results. Without being asked by the mathematics teachers, they try with many numbers to testify the truth of the statement. This can be real fun for the children who have acquired curiosity about number relations. By a close study of plenty of such illustrations a general formula can be deduced. The teaching of mathematics through this method, known as the Inductive Method, has been approved as the most satisfactory method.

3. The product of 12 and 42 is

504. The digits of the multiplier and the multiplied are reversed. But still the product is the same.

- a) $12 \times 42 = 504$
 $21 \times 24 = 504$
- b) $13 \times 93 = 1209$
 $31 \times 39 = 1209$
- c) $46 \times 32 = 1472$
 $64 \times 23 = 1472$

Plenty of such examples can be drawn by the pupils themselves by trial and error, and discover the relationship between the numbers.

4. Number Patterns

- a) $9 \times 6 = 54$;
 $99 \times 66 = 6534$;
 $999 \times 666 = 665334$; etc.
- b) $7 \times 7 = 49$;
 $67 \times 67 = 4489$.
(Square numbers)
 $667 \times 667 = 444889$; etc.
- c) $6 \times 7 = 42$;
 $66 \times 67 = 4422$;
(Repeated digits)
 $666 \times 667 = 444\ 222$; etc.

5. Squares and Square Roots

- a) Numbers and their reverses are both squares
144 169 1089 10404 10609
441 961 9801 40401 90601
12544 12769 10036224
44521 96721 42263001; etc.
- b) Squares and square roots with repeated digits :
i) 55 00 00 22 44 : Square root is 74162
ii) 165 165 836 836 : Square root is 406 406

iii) 97 97 04 04 : Square
root is 98 98

iv) 997 997 004 004 : Square
root is 998 998

6. Divisibility

a) An integer of three digits repeated twice is divisible by 7, 11, and 13.

643 643, 352 352, 101 101, etc.

b) An integer of two digits repeated thrice is divisible by 3, 7, 13 and 37

92 92 92, 64 64 64, 11 11 11,
etc.

c) An integer of four digits repeated twice is divisible by 73 and 137.

5892 5892 2345 2345 1111 1111,
etc.

The pupils can verify the truth, coining problems themselves.

Conclusion

All the illustrations cited above are not exhaustive. Voluminous literature can be made available for the children of elementary and secondary schools. The purpose is not to teach these as a regular subject but to present them occasionally, just for motivation to the study of the Number Theory through recreation. It is desirable to have a chapter on recreational arithmetic in textbooks. This incidental motivation creates discovering attitude in the children. This ability will be strengthened later which may result in research-mindedness. It is no wonder that the children who are exposed to such treatment in the beginning may turn out to be great mathematicians and contribute to the advancement of the subject, or the same ability may be used for research work in other spheres of knowledge. \square





Developing Reading Habits Among Children

R. S. SHARMA

*National Staff College for
Educational Planners and
Administrators, New Delhi*

DURING a discussion on an innovation of any new teaching technique in a seminar on primary education, we are often stuck on the point that a majority of primary schools lack such facilities as buildings, blackboards, etc. In other words, the inadequacy of

resources is the plea generally taken against any plan for educational development. Similarly, when we talk of developing reading habits among primary school children, we are immediately faced with the usual argument of the non-availability of even school textbooks, what to talk of other literature for the purpose.

Recent researches in the education of the child have brought about a revolution in our system of education. A great educationist Jean Piaget has proved on the basis of his researches that a child of six or seven years can understand those obtruse values which are understood by a man of 24 or 25 years, provided the child is exposed to the appropriate environment. Bengemen Bloom, a great

Education is a long and continuous process of life, which goes from home to tomb

educational psychologist, has proved that 50 per cent of the mental development of a child is over up to the age of 4, 80 per cent up to the age of 8 and the quality of life of an individual then depends on the rest of the 20 per cent development. These two findings make us aware about the value of the early years and early education of the child.

Value of Reading

What is proper education of the child? How can it be imparted? This is a long and continuous process of life, which goes from home to tomb. Its analysis is envisaged in knowledge, skills, habits, attitudes and values. In general terms, we can say that a person acquires knowledge and experiences through education. Knowledge and experiences are complementary to each other. Sometimes, complete knowledge of a particular subject cannot be acquired without experiences, and vice versa. The main source of knowledge and experiences is books. Through the study of books, we think, discuss and act.

Reading books, taking interest in reading, gaining knowledge out of reading, developing personality, and thereby improving one's life are not easy things to do. But

persons who develop these qualities reach the pinnacles of glory. For example, Mahatma Gandhi turned over a new leaf of his life after reading the book *Unto The Last* by Ruskin. But when are these qualities developed and how can we develop these qualities? The best period for the development of these qualities is the early years of childhood. And the responsibility for such development rests with the teachers, parents and society. They can inspire the children to take interest in reading books.

Initially, the emphasis should be on the value of reading. The children should be told as to how we can communicate better after reading books. In order to enrich our power of thinking, we have to depend on books. Reading of books is important for the evaluation of a particular educational material, for giving comments, to discriminate between a right and a wrong judgement, etc. Reading provides pleasure. If we instil these qualities in the minds of young children, they would naturally take interest in reading books. These qualities will make them good citizens.

Choice of Reading Material

When we encourage the children to read newspapers, weeklies and other books, apart from textbooks, we have to be cautious that they do not read undesirable material which is available in the market. It is the duty of the parents and teachers to provide them with useful reading material.

Parent-teacher associations can contribute adequately in this regard. Parents can inform the teachers about the special interests of their children. This process will facilitate the work of the teacher in providing reading material to the students in accordance with their interests and attitudes. Some parents purchase material for their own reading but the same is also read by their children. This should be avoided. They should provide children with the material meant exclusively for them. Parents should also discuss the content of the reading material with their children.

Generally, the children read books without discussing the content critically. They do not write in their diaries difficult words, strange experiences, useful summaries, quotations, etc. Hence, in order that they retain what they read, the teachers and parents should inspire them to write briefly about what they have read. Besides this, they should try to find a relationship between the knowledge acquired from the books and their experiences in daily life situations. This is possible only if the teachers and parents properly guide them in the process.

Now the question arises : How should the children read ? In the early years, the teacher should develop reading readiness in the children. He should narrate interesting stories in their own language and tell them the moral of these stories. The children should also develop their speed of

reading. For achieving this, the teacher should organize reading competitions among the children. For instance, they should be asked to read a story in a given time and then write about its main theme in summary form. They can also be asked to narrate the story in their own words verbally or otherwise.

Gradually, we should develop their habit of creative reading. They should be able to evaluate and comment on the material read. They should also be able to use their knowledge in daily life. This is possible only if the teachers actually give practical demonstration of these processes in the presence of the students. They should provide the students with opportunities to practise them. The teachers should answer, without any inhibition, all the questions that the students raise during the discussion and encourage them to clarify their doubts.

Another factor contributing to the promotion of the reading interests of the children is the provision of library period in the school time-table. In the library period the teacher should distribute books to the children for their self-study. He should go to each child and guide him about the title, author, contents, illustrations, pictures, theme, etc., of the book. The teacher can thus help solve several problems of the children in the selection and reading of books.

The above discussion, thus, makes it amply clear that what

we make of the child in his early age so shall we inherit the nation tomorrow. Despite the off-repeated inadequacy of resources, the children still have the potentials of developing reading habits which are essential for their total

development in this fast-changing modern technological society. What is, therefore, immediately required on the part of the teachers is to inspire and guide the children on why to read, how to read and what to read. □

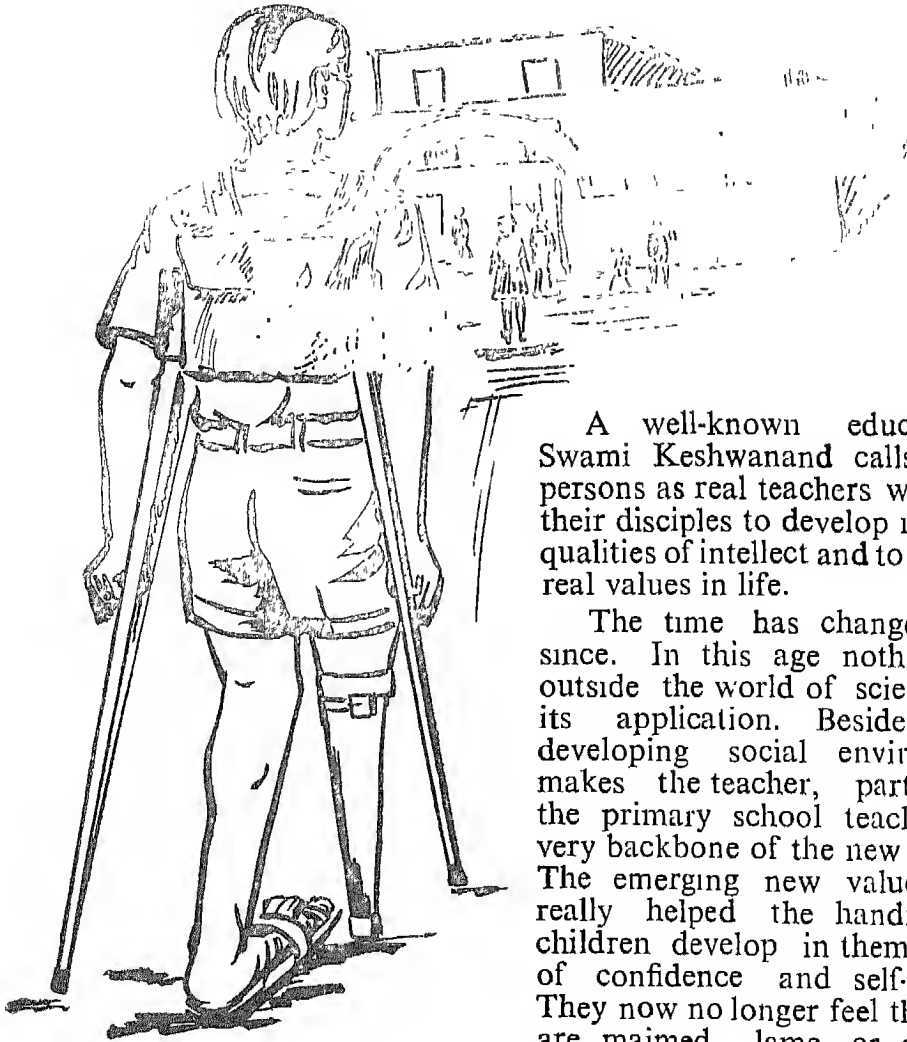


The Primary Teacher and The Handicapped Child

B. N. KAUSHIK

*Bihani Shiksha Mahavidyalaya
Sri Ganga Nagar, Rajasthan*

HE WHO is able to inculcate pious and gentle thoughts in his disciples is really a praiseworthy teacher. This view expressed in the *Rig Veda* is true even today. In the *Yajur Veda* the teacher is compared to the mother. Just as the mother nurtures the child carefully in her womb, the teacher too should take care of his disciples in the same spirit.



A well-known educationist Swami Keshwanand calls those persons as real teachers who help their disciples to develop inherent qualities of intellect and to achieve real values in life.

The time has changed ever since. In this age nothing lies outside the world of science and its application. Besides, the developing social environment makes the teacher, particularly the primary school teacher, the very backbone of the new system. The emerging new values have really helped the handicapped children develop in them a sort of confidence and self-respect. They now no longer feel that they are maimed, lame or disabled

orphans at the mercy of society. They have started considering themselves as an integral part of the society, the nation and the humanity. Science has boosted up their capacities and, as such, they need be brought back into the main stream of life. And herein lies the great responsibility of the primary school teacher. He can transform the life of the handicapped through the latest teaching techniques and other innovations in different spheres of education.

In every school there will be some handicapped children. The teacher should try to know their present condition, understand their problems, and work towards their development. He should also impress upon the handicapped and other students that the former are not crippled but are only less capable. This will further build up the confidence of the handicapped children, and the confidence generated at the crucial primary stage will shape their future life in the desired direction.

The teacher must also acquaint himself with the age, capability, social status and actual condition of his students. He should guide his students sympathetically and patiently so that they develop faith in themselves. The teacher can take the help of the latest scientific aids and familiarise the disabled children with their uses so that they may overcome the feeling of their disabilities and gain knowledge of their potentialities. Further, the teacher must seek the cooperation

The teacher can infuse new life into the handicapped by making him conscious of his potentialities to become a useful and productive member of society.

of the guardian and the doctor to achieve total development of the handicapped child. The guardian can give proper care and protection, the doctor can help alleviate the disability and the teacher can coordinate both with appropriate education, depending upon the developed capabilities of the child. However, the end-result of the combined efforts of the guardian, the doctor and the teacher will ultimately depend upon the strength of the teacher's faith in his objectives and action-plans.

Within the limits of his sphere of activity, the teacher must contemplate that the handicapped is just a part of his own body and it is his responsibility to achieve the total development of that part. The handicapped should be able to make such use of artificial limbs and other aids so that they can be controlled by his nerve centres. That is the main aim of education of the handicapped. Keeping this in view, the following points ought to be emphasized :

- Classification of students according to the stage of their backwardness and their problems.
- Adoption of a balanced approach, considering the capacity, interest and abilities of the handicapped.

- Development of an education programme according to the needs of the handicapped.
- Appointment of specially trained teachers to look after the gifted handicapped children.
- Spontaneous allround development of the handicapped, integrating professional dexterity, social adjustment and personality development.
- Proper utilization of

leisure time so as to lead the handicapped towards self-dependence, thereby making him a useful member of society.

In the words of saint-poet Kabir, the teacher is like a potter who while making a pot supports it from inside and strikes it from outside to give it a good shape. Thus, the teacher can infuse new life into the handicapped by making him conscious of his potentialities to become a useful and productive member of society.





TEACHERS WRITE

How to Educate a Child

CHILDREN PLAY and grow up in the lap of nature. It is, therefore, imperative on their part to know what nature is. This knowledge has a direct bearing on their social and practical life because it is only through this knowledge can they resolve problems that may face them from time to time.

We live in the age of science and technology. We need science in almost all walks of life. Science has, therefore, to be an essential part of our education. The teaching of science through books, however, is not advisable. Scientific knowledge is scattered all around us. Therefore, the children should be taken back to the nature to see things naturally and learn about them. They should be taken to the fields, gardens, ponds and springs where they are able to exercise their own ability to perceive, adopt scientific techniques of observation and acquire real knowledge. If a child is being taught about flowers, fruits or leaves, it is much better that he is taken round a garden where he learns about them in a natural environment.

Small children like to travel around and if education is imparted through this method it would be very helpful in learning and acquiring new knowledge. This will also help them to develop more taste for travel.

The teacher should select very carefully the places where the children could be taken. These places should be of such types

where, according to the requirements of the children, they should have sufficient time and objects to see and learn about them. For example, while teaching physics, visits to radio station, television centre, telephone exchange, railway workshop, roadways workshop or power house are helpful. In the teaching of chemistry, the children could be taken round soap factories, ice factories, mines, sugar mills, water supply, etc. Similarly, while teaching biology, the children could easily be taken to gardens, ponds, springs, aquariums, museums and science exhibitions.

Whatever a child learns through observation or experimentation, that knowledge is solid and everlasting. Through observation a child develops a rational mind and also an ability to take proper decisions. It is, therefore, essential that visits to different places of interest are organized as an important part of modern education of the child.

VIJAY SHANKER DWIVEDI
Lecturer
Janta Intermediate College
Nagra, Balia (U. P.)



Rural Primary School

THE IMPORTANCE of education for the allround development of

the child is really great. In fact, the development of one's whole personality depends upon the type and level of education one receives.

Schools meant for the children of the age-group 3 to 11 are generally known as primary schools. A primary school teacher has an important role to play in building the allround personality of primary school students and thus to lay a strong foundation of education. However, during the post independence period the progress of primary education in our country has been rather slow, particularly in view of the economic difficulties. There are other factors also that have been responsible for the slow progress of primary education.

The government has been quite indifferent to the cause of primary education all over the country. Primary schools in different states have a great deal of variations in terms of equipment and facilities. Some schools are well-equipped while some others are extremely poor in this regard. There are also significant differences in the pay-scales of similarly qualified teachers in different parts of the country. For instance, a primary school teacher in Bihar gets much higher pay than the one in Uttar Pradesh. Even within a state these differences are visible. This step-motherly treatment causes a great deal of frustration among the teachers, as a result of which adequate progress in primary education can hardly be made.

Primary schools are of two types : bigger schools in towns and cities which are provided with the facilities like mid-day meals and other similar improvement schemes, and small primary schools in villages that are totally ignored in so far as these schemes are concerned. This means a differential type of treatment to different sets of children in schools in rural and urban areas.

Able teachers make a great factor in imparting the right type of education to the children. The children are gifted with certain natural propensities which develop in accordance with their intelligence. The teacher is an artist who through his art seeks to develop their basic propensities in a proper way and also helps them learn how to adjust with their social environment. He gives them proper education according to their interests and abilities, aptitudes and attitudes. He helps them grow properly. In short, a properly trained and able school teacher really works for the excellence of school education.

As to Mahatma Gandhi, India is primarily an agricultural country. Most of its people live in villages. Rural and agricultural products have always been helpful in the economic development of the country. Even during war, they help in the defence of the country. It goes without saying that rural people are doing their maximum to improve the economic condition of the country. That is why it is very important

to impart constructive and creative education in village schools. Really meaningful creative education should begin in Classes IV and V. Many activities such as carpet - weaving, soap-making, basket-making, net-making, cord-making, etc, can be taught to the children of these classes. The students of lower classes will try to emulate them and, in turn, learn these trades and activities. Constructive education will result in physical, mental as well as intellectual development of the children. This training to primary school children can be really useful and productive.

VIKRAM RAI
Headmaster
Primary School
Sagarpath
Hanumanganj, District Balia



Primary Education and the Future of the Child

One can learn from anything, man, bird or even animal, on the basis of one's experience. Experience, in fact, plays an important role in one's life, and particularly the impressions received by the child in his early days make a sort of foundation for his future. An analysis of the primary school teacher's work reveals a few fundamental factors which

influence the child's future.

First, the primary school teacher has to share the responsibility and lighten the burden of the parents by imparting education, solving problems and working for the allround development of the children put under his care irrespective of any distinction of caste, colour, creed, sex, or socio-economic background. He should treat all the children alike just as the parents do. He, thus, can make an indelible impression on the children who may, in turn, imbibe the same type of attitude of equality in their way of life.

Secondly, the primary teacher can do a good deal towards the bright future of the children by doing his duties as faithfully as the traditional Indian *Gurus* did. He has to be unlike the master-wrestler who does not share with the trainee-wrestlers all the tricks in the game of wrestling. A really good teacher is he who tries not to hide anything from the children; on the contrary, he helps them become even more knowledgeable than himself.

The teacher has also to be a kind of guide to solve different problems of the children. There are several incidents of theft, fighting, indiscipline, etc, involving the primary school children. The responsibility of solving these problems is no less than the work of a judge. As a wrong decision taken by the teacher is likely to affect the future of the child, he should analyse the situation objectively and take an impartial decision.

Lastly, the teacher's major responsibility is to help the children understand and realize that the school is not a prison house. He should neither frighten them nor punish them severely for their lapses lest they should leave the school for good. On the other hand, he should make positive efforts to make the school an ideal place for them to come to.

Thus, the primary teacher plays a very important role in building the future of the child. The children at the primary stage have really an impressionable and flexible mind which could be easily moulded as the teacher wishes. The primary teacher is, thus, more a gardener and should look after the development of his children as tenderly as does a gardener in the case of his plants.

ISHHAAK KHAN
Assistant Teacher
Government Primary School
Bahagon, P.O. Angraiya
District Etah (U. P.)



How can Mathematics be made Interesting in Primary Classes ?

MATHEMATICS, as we all know, is a compulsory subject in the primary classes. The aim of teaching mathematics is to develop in the children a rational mind. Yet,

this is a subject which most of the children are scared of. They find it very dry, boring and difficult. They get so frightened that they start avoiding the mathematics class. Prolonged lack of interest in the subject makes them lag behind in their studies affecting their overall achievement in the school.

Mathematics as a subject of study at school is not inherently dull and uninteresting. What makes the children disinterested in the subject is the way we teach it. We ourselves make a bogey of the subject and we hardly care to understand the interest of the children. The obvious result is that the children develop distaste for the subject and once they lose interest, it becomes extremely difficult to bring them back to the class.

Thus, if mathematics has to serve its purpose of developing a rational mind, its teaching must be made interesting and attractive. Unless the children develop interest in the basic subjects, the whole teaching process will be a futile exercise.

There are several ways in which the teaching of mathematics could be made interesting. For example, the concept of numbers could be taught by singing a nursery rhyme which contains numbers, for instance :

One two three
This period is free
Four five six
The door I shall fix

Similarly, addition, subtraction,

multiplication and division could also be taught with the help of quizzes and drawings. For teaching addition and subtraction, use could be made of such things as flowers, leaves and other things found in nature which the children would love to watch and use in the learning process.

In the same manner, knowledge of geometry could be given to the children by cutting newspapers in different shapes, or through several other play-way activities.

Thus, all efforts should be made to remove the misconception

of the children that mathematics is a dull and difficult subject. It should be presented in a most interesting manner relating it with the daily life of the children. Once their interest in the subject is developed and sustained, their understanding even of difficult concepts will automatically follow. Much, however, depends on the ability, capability and intelligence of the teacher.

CHUNNI LAL SAIJUA
Primary Teacher
Sanjeev Sadan
Physical College Road
Shivpuri (M.P.)

News and Views

A Child's Eyevlew of a Good Kindergarten Teacher

A third-grader, spotting her kindergarten teacher in a grocery store said, "Mother, I liked her. She was a good teacher." And when, on the way home, her mother asked her if she knew why she liked the kindergarten teacher and why she thought she was a good teacher, she came forth with these rather sage remarks—remarks which teachers and parents alike might well ponder. "Well, for one thing, she had lots of good ideas, but even though she had lots of good ideas of her own, she always liked our ideas too. For another thing, she always gave us time to do things. Then too, I remember she used to tell us good stories, and she never seemed to be in a hurry. For another thing, I remember she was always fair, she always let us tell how we thought it happened. Then too, she always seemed to know what was going to happen next. And another reason I liked her was because she seemed to like us—she liked all of us..... And I guess another reason I liked her was because I liked her clothes. I just loved the feeling of her coat. It wasn't very

long but ooh it was soft !"

(From Faster and Headley's 'Education in the Kindergarten'.)

By Children For Children

Just a few months from now, New Delhi will host a most unusual conference where children will be the only delegates and the only speakers ! Adults will just be observers !

The delegates will be between 12 to 16 years old. They will run the conference themselves, say what they think are their problems, and describe what they see as their future. They will also talk about how they think the problems of the developing world can be solved. For the first time children will do the talking on such subjects in an international forum, and grown-ups, including top policy-makers, will listen.

The conference, as reported in a *small voice* (UNICEF), is the brainchild of the International Union for Child Welfare (IUCW). It will be held under the sponsorship of the IUCW, the government of India and UNICEF. The IUCW sees the conference as a

way of bringing the International Year of the Child before the public in a dramatic and personal way. Delegates will be selected through essay competitions and debates. First the essay competitions will be held in high schools all over the world. The winners of these will then talk about problems of children and the future of children as they see these and discuss the problems of the Third World. The discussions will be on national tv and in other public forums. The children who win these debates will be the delegates to the conference.

The iucw's idea is that essay winners will get known in their own countries because of the interest local and national newspapers, tv and radio will take in the contests. This will make their parents and friends want to know what the whole thing is about. So the special message of the International Year of the Child will reach right into many homes. Only if it does this can we achieve the goals of the year.

The choice of a Third World country to host the conference will give the children from other parts of the world a wonderful chance to see the Third World for themselves. Their visit will be like a fascinating study tour. About 300 delegates will attend this unusual meeting.

The conference will start on 14 November 1979, Children's Day in India. Before that the delegates will be taken on an exciting bus tour so that they can

see what rural life is like in a developing country. They will watch how people make traditional handicrafts, as well as have a look at the country's industrial development. They will get a taste of its scenic grandeur, see glimpses of its history and get to know a little of how the people live their everyday lives.

The conference will be covered by world tv. And this will take back to millions of homes all over the world a rich educational and human experience.

Minister Seeks Ban on Cane

The use of the cane in Australian schools may soon be outlawed, reports John Kirkaldy from Sydney in *Times Educational Supplement*. The Federal Government is to recommend to state education authorities that corporal punishment be banned in all schools.

The Minister for Education, Senator John Carrick, said in Parliament that he opposed corporal punishment and believed it should never be used.

The use and conditions of corporal punishment differ from state to state. In general, most states place restrictions on how the cane or strap must be used. The New South Wales department of education, for example, has ruled that the cane should be unnecessary except in extreme cases.

Corporal punishment in New South Wales can be administered,

the Parishad then met the Chief Executive Councillor, Shri K. N. Sahani, and informed him about the teachers' meeting with the Education Minister. The Chief Executive Councillor was reported to have given an assurance about the implementation of the demands accepted by the Education Minister.

The demands accepted relate to the enhancement of pay-scales, parity of service benefits, removal of anomaly in respect of junior and senior teachers and retirement age to be kept at 60 years in NDMC and Delhi Corporation schools, for the teachers who joined before 1973. □



JOURNAL OF INDIAN E D U C A T I O N

The *Journal of Indian Education* is a bi-monthly periodical published by the National Council of Educational Research and Training, New Delhi.

The purpose is to provide a forum for teachers, teacher-educators, educational administrators and research workers, to encourage original and critical thinking in education through the discussion of current educational views, and to promote the development and improvement of educational practice. The contents include articles by distinguished educationists, challenging discussions, critical analyses of educational problem, book reviews and other features.

Manuscripts sent in for publication should be *exclusive* to the *Journal of Indian Education*. They should be in duplicate, typed double-spaced and on one side of the sheet only, addressed to the General Editor, *Journal of Indian Education*, Journals Cell, NIE Campus, Sri Aurobindo Marg, New Delhi-110016. Contributions accepted are paid for on publication.

The views expressed by individual authors are their own and do not necessarily reflect the policies of the Council.

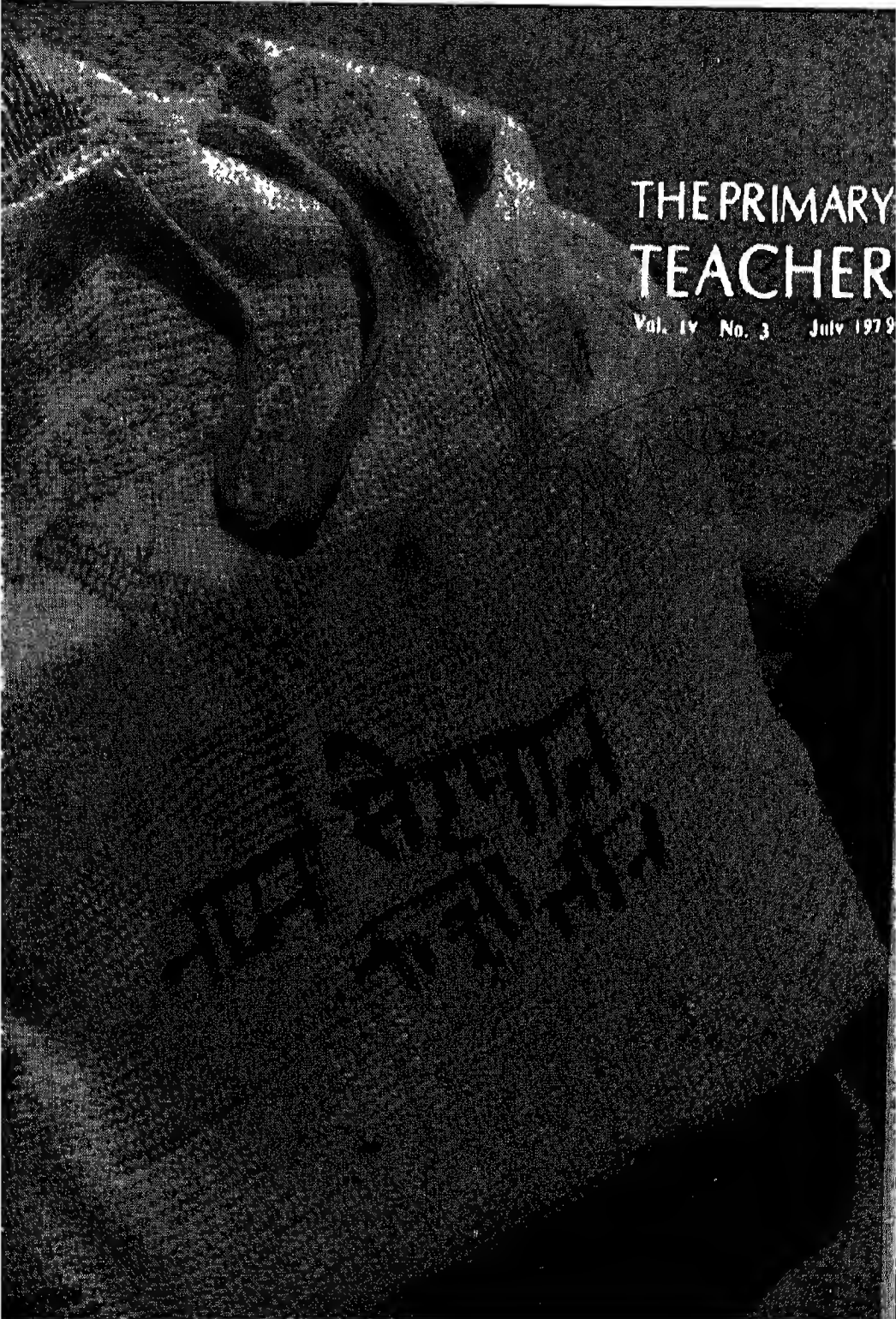
Copyright of manuscripts published in the journal will vest in the NCERT and no matter may be reproduced in any form without the prior permission of the Council.

Published by V. K. Pandit, Secretary, National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi-110016, and printed at Everest Press, 4 Chamelian Road, Delhi.

General Editor : Prof. R. P. Singh

Regd. No. 28935/76

The primary teacher is the fulcrum about which the entire educational system turns. It's under his care that the destinies of the children are shaped in different directions and according to their needs and potentialities.

A high-contrast, black and white photograph of a hand holding a piece of fabric with a grid pattern. The hand is positioned in the upper left, with fingers gripping the fabric. The fabric is dark with a lighter grid pattern. The background is dark and textured.

THE PRIMARY TEACHER

Vol. IV No. 3 July 1979

The Primary Teacher is a quarterly brought out by the National Council of Educational Research and Training, New Delhi.

The journal intends to give to the practising teachers and concerned administrators authentic information about the educational policies being decided on and pursued at the Central level. It aims at giving meaningful and relevant material for direct use in the classroom. It would carry announcements of programmes, courses of study, etc., offered at various centres in India from time to time. It also provides a forum for the discussion of contemporary issues in the field of education.

The major features of *The Primary Teacher* are :

1. The educational policies concerning primary education
2. Questions and answers
3. States round-up
4. Illustrated material for classroom use

Subscription : A copy of the journal costs Re. 1 00. Annual subscription is Rs. 4 00

Contribution : Articles and papers written by school teachers either in English or in Hindi are welcome. Each published article would be paid for. Two typed copies of the article should be sent in for consideration.

The paper used for the cover and text of this journal is a gift from the Unicef

General Editor : Prof. R. P. Singh

Academic Assistance : D N Khosla

Production : C. N. Rao
Chief Production Officer
: Kalyan Banerjee
Production Assistant

Editor : S. K. Malhotra

Editorial Assistant : Archana Sood

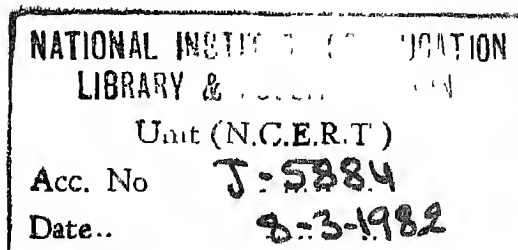
Artists : Wagh
: C. P. Tandon

Please send your subscriptions to
Business Manager
Publication Department
NCERT, NIE Campus
Sri Aurobindo Marg
New Delhi-110016



THE PRIMARY TEACHER

Vol IV No. 3



July 1979

In This Issue

EDITORIAL ... 3

Primary Education Reforms and Universalization of Elementary Education

B. D. Gururani ... 5

Illustrations in Children's Literature

R. K. Chopra ... 7

Elementary Education and Science

J. S. Rajput ... 11

Energy and Child's Inquisitiveness

Suman Bala ... 15

How to Draw a Cat

K. C. Wagh ... 18

Teaching Reading through Dramatization in Primary Classes

P. R. Saluja ... 22

The Teacher and the Inquisitive Child

D. L. Gupta ... 25

TEACHERS WRITE ... 28

NEWS & VIEWS ... 36



Cover : Courtesy CET

Thoroughly to teach another is the best way to learn for yourself

—EDWARDS



The secret of education lies in respecting the pupil.

—EMERSON

CHILDREN'S WORLD OF ART AND PLAY-ACTING

CHILDREN have creative mind. They create constantly. Their imagination being what it is, they constantly make figures and drawings which may not have any bearing on the reality but they still have the power to attract even the most dull and routine man. While they make new things out of the old, the adult world is likely to misunderstand them. Indeed, the idiom and terminology of the child are quite different from those of the adult, hence the latter must acquire some understanding of the expressions of the former

Children are fond of colour and form. Again, the colour combination and their arrangement have different connotations for different sets of people. What makes children busy and therefore happy may not make adults either busy or happy. The world of art holds out the greatest charm for them. It is

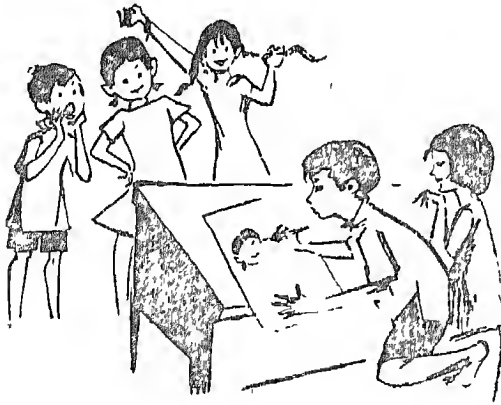
not so much the time or the colour that matters for them but the meaning they attach to these. A single stroke of brush may signify anything to them ranging from the sun to an animal. But for all this an adult has to learn to unreveal meanings everywhere and in whatever form it is possible for him to do so.

Colour or drawings are not the only things that attract children. They like to collect, hoard and exhibit. They love to play-act real or imaginary characters. Playing mother, father, doctor, teacher, etc. are the most common roles they like. Depending on the sex, children show tendencies to excel each other in all these *arts* and actions. Each child has a world of his own, something he is only too willing to share.

Teachers are not only expected to know what children do and like

but they also must utilize this awareness for teaching the three R's a little more naturally than they really do. One could excite a child's imagination so that he fulfils a part of his hidden self. He may be encouraged to play-act simple parts and characters

without any elaborate preparation. Thus if the teacher could move close to the nature and temperament of the child, teaching, perhaps, could easily become a joyful activity than what it is generally considered to be—the dreaded drudgery.



Primary education reforms and universalization of elementary education

B. D. GURURANI
*Lecturer
Regional Institute of
Education
Almora (UP)*

A DEMOCRATIC NATION like ours cannot claim to be a developed nation unless its total population is well educated. Education is the source of peace, prosperity, welfare and security of human life. The proper functioning of democracy and national progress are not possible unless illiteracy is eradicated.

In spite of the constitutional provision of free and compulsory education for all children up to the age of 14 years within ten years from the date of promulgation of the Constitution, about 68 per cent of our population is still illiterate and this includes more than nine crore children in the age group of 5-14. For economic and other reasons, many of these children are working on farms, in factories and restaurants while Article 24 of Constitution prohibits employment of children in factories, etc.

In a broadcast on the eve of The International Year of the

Child, Prime Minister Morarji Desai said, "children are the civilisation's base for the future...It is on them that the humanity can build the foundation of a bright future". To build this foundation and to ensure a bright future, therefore, we must make concerted efforts to eradicate illiteracy which causes ignorance, poverty, superstitions and other social evils that hinder national progress. The task is stupendous, yet some measure of cooperation and coordination among Government and private educational and other agencies could help improve the situation.

The Government has launched the National Adult Education programme with a provision of Rs. 200 crores. At the same time, the year 1979 is being celebrated as The International Year of the child. Several further programmes have been initiated to mark the above two events. What is important, however, is the intent content and effective implementation of a programme. Despite the fact that principle of universalization of elementary education has been accepted by the Government, there still exists a gap between the ideal and the real. The poor enrolment in primary and middle school shows that many of the boys and girls in the age-group 6-14 do not enjoy the facility of schooling, may be due to their poverty, ignorance, backwardness or perhaps they find present educational system unsuitable and unproductive. Thus, to eradicate illiteracy, or at least to reduce its percentage, and to make universalization of elementary

education an achievable goal, the present primary education system needs to be changed, or, at least reformed, to make school an interesting and attractive place for children to rush to. There is already a cry for a total change or 'total revolution' in the present education to make it purposeful, effective and related to the social and economic needs of society, so that it might be helpful in developing the qualities of free thinking, constructive approach and good leadership among our students.

Besides the formulation of educational goals related to the needs of society and the framing of the school curriculum embodying these goals, the next important factor in educational change or reformation along desired lines is the quality of teachers, particularly at the primary level. According to the Kothari Commission, of all the different factors which influence the quality of education and its contribution to national development, the quality, competence and character of teachers are undoubtedly the most significant. Despite this recognition, teachers have unfortunately, been a neglected lot. Their economic status, particularly, has never been better than even a clerk. On the other hand, teachers, too have forgotten the importance of their effective role in the social and economic upliftment of society. This situation must be corrected to improve their economic status and to make them realize once again that it is they who are the builders of the nation that we inherit tomorrow.

Other points linked up with the quality of teachers are their proper training, supervision and inspection. They should not only be imparted the least training at teacher training institutions, but there should also be periodical visits of teacher-educators to schools to supervise the work of teachers. Teacher-educators alone can provide the most-needed link between inspection and teaching.

Inspection should also be made effective. For the betterment of education, inspecting staff should also cooperate with teachers. They should present model lessons and try to guide the teachers and remove their difficulties. They should know how to assess the work of teachers. Therefore, the inspection system also deserves a complete change to eliminate the attitude of bossism. Only a good teacher deserves to be a good inspector.

In terms of physical aspects, primary schools need more improvement regarding buildings and accommodation, nutrition and medical aid, teaching materials and play-grounds. An ill-equipped teacher cannot teach effectively. In some schools even chalk and blackboards are not available.

Thus such sweeping reforms in primary education as specifying educational goals, framing of the curriculum reflecting the declared goals, proper training of the teachers and enhancement of their economic status, making school life purposeful, interesting and attractive are some of the prerequisites for successful implementation of the scheme of universalization of elementary education.

Illustrations in Children's literature

R K. CHOPRA

*Lecturer
NCERT
New Delhi*

THE LITERATURE for children is a recent development. This is intended to keep alive their emotional interest in things which the adults call by the terms 'imaginary', 'fantasy', 'fiction', etc. They have strong instincts to discover what is even unbelievable. This is a natural curiosity shared by all children.

Some of the traditional trends of story-telling are either languishing or are already extinct. A popular art known as 'kathas' which provided moral and aesthetic satisfaction is more or less extinct today. Another trend of story-telling was the folktales about make-belief, fantasy, fairy tale, etc., which every grandma used to tell to the children at bed time. This too is being lost because of too much emphasis on examination based textbooks.

There are few evidences of published literature for children in the past. The stories of 'Panchatantra', since they have practical

wisdom for use by the adults, cannot really be called as material meant for children. Of course some elements of surprise, the treatment of themes and characterisation, do appeal to children. The scant evidence of printed literature for children in India is perhaps due to the reason that publishers find meagre clientele among child readers. On the other hand, children in the West are in a happier position since they have exclusive literature on such themes as social history, adventure, moral and fairy tales, etc, from the time the printing technology came in vogue in the 18th century. The specimens of this literature were available in India during the pre-independence period.

The idea of children's literature is gaining a lot of importance in every country. A study conducted in America to assess the interest of children in their literature of various kinds revealed that on an average, a child reads about twelve times more textual material through picture-books and comic-books alone than from his usual school textbooks. This study indicates how much children enjoy reading their literature if there is genuinely good material for them.

Since the aim of this paper is to focus attention on the role of illustrations in children's literature, it is necessary to highlight some issues regarding illustrations. A few studies were undertaken by the National Council of Educational Research and Training (NCERT) to assess different types of illustrations in textbook published by

different states and private publishers. The nature of studies conducted was to evaluate various aspects of these illustrations—such as, the number of illustrations, their sizes their relevance with the text, their nature—whether line, halftone or colour diagrams—the printing technology used, their overall effect, etc. The aim was to know whether such illustrations meet the needs of children, their past experiences, personal taste, subject needs, etc. However since a textbook cannot be equated with a work of literature. There is a need for a study to develop criteria for illustrations for children's literature. The emerging information about the appropriateness of illustrations suitable to children's sensibility, perception and understanding would be quite useful for the publishers and other entrepreneurs engaged in producing literature for children.

At present, an illustrator, while treating a theme of a children's story, works out his scheme on two major considerations. These are (i) to provide through illustrations a visual setting with casts and situations for the free play of children's imagination, and (ii) to stimulate their interest with the attractive designs of the illustrations. These considerations are based on an individual's professional experience rather than on any criterion evolved through a definite study.

Styles of Illustrations

The most popular styles in use for illustrating children's literature

in the western countries have been the following:

Traditional Approach

This style was in use in the past to show idealised forms for pleasing and delicate effects in the illustrations. The illustrations were



conceived to present people, environment, etc., in a most sentimental and aesthetic manner in order to enhance children's joy of the world around.

Realistic Approach

This style was in use till the second world war. The aim of this style was to present truthful representation of the facts through the medium of illustrations. This style



did not show any distinction between the adult's and children's preference for illustrations. The illustrator would present any scene or situation as it existed in reality.

Kinaesthetic Approach

The latest in use, this style attempts to draw a picture not because children will like it but because it will be close to the one that children themselves might draw. This style has been the result of various common characteristics found in the art work of children.

Kinds of Illustrations

There are essentially three kinds of illustrations used in children's books, including literary works intended for them. These are :

1. Linear drawings for giving flat effect corresponding to the flat paper surface. This kind of drawings sparkle against the white paper.

2. Mass drawings for giving solid effect through light and shade. This kind of drawings enrich the imagination for drawing exactness of forms.
3. Colour drawings for giving natural appearance through the use of true colours as in the object. These drawings have emotional appeal for the children.

Often, mass drawings and colour drawings have failed to produce the desired effect. This may be due to the bad execution of the drawings or that they have not been printed well.

Although the styles and kinds of illustrations are quite important factors, the publishers of children's literature have to bear in mind the psychology of children as readers



Generally, children's first intention is to search for a nicely printed book, perceive it well and read it if appeals to their sensibility. Another tendency among children is that they have no inhibition that they would read only a particular theme (it is the adults' habit to develop spheres of interest). Any theme which arouses their interest and curiosity or which gives them suspense and excitement is acceptable to them. How a publisher has planned a book for them gets a quick response for its being accepted or rejected by them. Perhaps, it is difficult to suggest as to what should be the approximate number of illustrations for rendering a theme or the whole book of literature. There is

no hard and fast rule. Sometimes, a book can be wholly illustrated though it may be intended for grown-up children. This simply depends on how a theme is required to be treated.

From the available books in literature, it has been generally seen that one illustrator has executed the illustrations for the whole book, including the cover. The aim of assigning the whole work to an individual illustrator is that he would maintain uniformity and would give the feeling of the whole story into pictures. Too many illustrators may disturb the interest of the children with the variations of styles and design qualities.

J. S. RAJPUT
Principal
Regional College of Education,
Bhopal

THE IMPORTANCE of education in the overall development of a country is known to all. It is also necessary that every class renders its cooperation in this development, and for this equal spread of education in all the areas is a must. In this regard there are directive principles in our constitution, but unfortunately, we have not been able to give them a practical shape. The vast expanse of the country, the number of children who need education, limited means and the necessity of quickly accomplishing the development tasks, are all mutually interdependent factors and situations. There is another dimension of the spread of education, i.e. the swelling numbers of the educated unemployed. Shall we spread such education as is likely to give a further boost to these numbers? The educated unemployed seeking jobs numbered 2296 thousand in 1971 and 4934 thousand in 1976.

The educationists of the country thought over all these problems and suggested a new curriculum of education. Education should be such as may help a man in being self-reliant, impart to him skill enough to save him from the hopelessness consequent upon unemployment, and cultivate in him a scientific attitude towards his economic and social problems. With this end in view, science will have to be brought into the entire system of education in schools effectively. Attention shall also have to be paid to the experience of socially useful productive work and vocationalisation of education. The new curriculum has a place for all this. The fact that science is necessary for all the elementary level has been acknowledged in the new curriculum. For the first time, due importance has been given to mathematics and science. Teachers, educationists, administrators and guardians have all unanimously acclaimed it as a proper step.

Now, let us think over the situation further. What is going to be taught in science? What utility will it have for the society? Are capable teachers available to teach it in every school? Shall the necessary materials (equipment/laboratories) be available to every school? Will it be possible to create interest among pupils for studying science? What efforts will have to be made for this and who will make them?

Thinking has been done on the problems and educationists have

agreed that arrangements can be made under which, despite various limitations the country can provide for education in science. Not only this, an effective and socially useful science education can also be provided. For successful implementation of this programme, we shall have to depend on the integrated approach of the teacher, the environment and the society. We shall have to recognize the right form of science and view it not within the four walls of the laboratory but outside. The plants and trees sur-

rounding the school, the sources of water, the mounds and mountains, the earth, the bullock-cart, the various forms of houses, the changing weather and clothes, the musical instruments—just think, don't these all contain an enormous treasure of science? Will there be any need for teaching the child more science than this at the primary stage? These are the things he sees and knows from the beginning and asks questions about them. He may also possibly have to grapple with social dogmas and fulfil his obligation

of becoming useful to his family and society in the same environment. It shall, therefore, be the main objective of elementary science teaching to develop scientific attitude which is the prime requisite for all this. Education imparted through environment translates into reality the principle of learning by doing. Through such a study the children will be better developed, creatively, intellectually and ethically, and will be able to keep themselves free from conventions and dogmas.

To begin with, science will be taught on the basis of units and integrated approach. So far, activities of the laboratory were unfortunately the same for all schools. Now it will not be so. Activities for a school in the coastal area and those for a school in a village of Himachal Pradesh will be based on the local surroundings and will certainly not be similar. We do not have to think from the viewpoint of setting up, on a large scale, laboratories on the conventional grounds. Teachers, pupils and society will have to learn science in the midst of, and through the sources provided by the nature.

The range of the sources available in the environment is very vast. Teachers in schools and parents at homes, wherever possible may select a variety of such examples and activities as may promote the process of learning in the child. He may be made to perform the activities on his own and learn the scientific type principles involved. The child should

not only know the theory but also perceive its practical or active form by 'doing' and get the satisfaction of an achievement. Such activities may not be restricted to the school. Germination of plants, their growth, ripening of fruits, burning of a candle, souring of milk, are some such examples which can be made use of without any laboratory or equipment and several principles of science can be illustrated before the pupils. None should be worried about the financial implications at the elementary stage. Water forms a part of several units at this stage and these can be taken up even in a village school where purification of water by filtration and by making use of earthen vessels containing pebbles, charcoal and sand, etc., with holes in the bottom, can be easily demonstrated and illustrated.

The students can study the effect of changing the number of pots/stages. This activity can be compared with other activities, like purification of water by boiling it with potash and also by mixing potash with it. Other aspects contained in various units can also be brought under the perview of these activities. The principle of conduction of heat can very well be illustrated by taking a frying pan with a wooden handle, by holding a cold beaker over a burning candle. Several ideas including the generation of water vapour during the burning of the candle can be explained and illustrated. The gas obtained by the burning of the candle when passed through the

lime water, exhibits the extent of impurity in the solution. These experiments help the children in gaining the knowledge and understanding of the wax, constituents of candles and also the products generated during the burning of the candle. A number of similar examples can be cited which substantiate our conviction that it is possible to start a new curriculum without worrying much about financial investment.

The entire foregoing discussion makes it clear that the pupil has to do an experiment by performing activities on his own, but the place of the teachers in the entire process is going to become more important than ever before. Every thing will hinge on his interest and capability of pooling the resources. He will have to change his attitude and the way of doing things. It will also be necessary to impart training to science teachers. We have already discussed how different the teaching of science will now be at the elemen-

tary level. Keeping this in view, the teachers will not only have to be familiarised with the new curriculum and the place of science in it, but will also have to be convinced that the science which they have to teach now will be found outside the school, and not in the cupboards of the laboratory procured from the city. It will depend on the teachers to discover it to make the children discover it and to define it in collaboration with the children. The teacher himself has to come forward, the curriculum will merely provide the guidelines. Which activities will have to be performed? How? And, which materials will there be available for them? All these will have to be arranged by the teacher. Through this process alone will the children have to be given the latest information. This alone will arouse and promote their curiosity and prepare them for effectively participating in a changing society and culture so that they are able to make effective use of science and technology.

SUMAN BALA

*Lecturer,
NCERT*

Every CHILD IS BORN with certain potentialities. They differ from individual to individual. A child learns from the environment. The earliest and most formative environment is his family. Then comes the primary school where an individual starts to form his personality. The mother, the teacher, the immediate neighbours of the child in the class and at home and all the nearby environment, play an equal role in the formation of a new generation. It is difficult to say which of these factors will have a predominant influence on a particular child. Because of the inquisitive nature of the child, everytime he is putting one question or another. It is quite

possible that he gets one answer from one environment and another from the other part of the environment. It is difficult for the small child to decide which one to accept. It is well-known that the child accepts everything that is said by his teacher and that is the common environment to all the children. So the teachers particularly of the primary level, have to play an important role in building up the nation.

Let us try to answer some of the questions a child asks.

CHILD : How do we walk ?

ANS : We walk with our legs.

CHILD : We walk with two legs, but a dog walks with four legs and a fan walks by itself.

ANS : Fan does not walk. We have got two types of things . living and non-living.

Living things—which can walk from one place to another by themselves, e.g., dog, cat, horse, man, etc.

Non-living—which can not walk from one place to another by themselves, e.g., table, chair, almirah, fan, etc.

CHILD : Fan also walks by itself.

ANS. : No, "fan does not do so by itself, but it sets in this way by the switch.

CHILD : Table also walks by itself because when you push, it goes from one place to another.

Ans. . When you push a table, you are applying force on the table which is doing work. In the case of a fan, work is done by the switch.

CHILD : How does this switch act?

Ans. : Here electric energy is converted into work energy. Similarly, when a bulb is lighted, electric energy is converted into light energy and when we hear a bell, electric energy is converted into sound energy. Sometimes, we are wasting energy, e.g.,

- (i) Lights are on when we do not need them.
- (ii) Gas is on when we are not using it.
- (iii) Fan is on when we are not in the room.
- (iv) Heaters are on when we are not in the room.
- (v) The tap is on even when we are not using water.
- (vi) Buses after start are not moving.

We should not waste energy. We should save it. Energy sense is a common sense.

Now let us try to give simple examples.

CHILD : This means we are getting energy to do work from our food.

Ans. : Yes.

CHILD : From where does the food get energy ?

Ans. : The food we eat has pulses, vegetables, fruits and milk, which are obtained from plants. The plants synthesize their food with the help of sunlight.

CHILD : How does sunlight help plants in making our food ?

Ans. : Sunlight is a form of energy which is necessary for the growth of plants.

CHILD : Is water necessary for the growth of plants ?

Ans. : Yes, water and air are necessary for the growth of plants. Plants get water from rains and sunlight is responsible for rains. Water from rivers, lakes, ponds, etc., is evaporated by the heat of the sun to form clouds which are responsible for rains.

CHILD : Can we not get energy from the sun ?

Ans. : We can also get energy from the sun in many ways. We can heat water if we keep a bucket of water in the sun.

CHILD : Can we cook our food from the energy of the sun ?

Ans. : Yes, we can. We have to make such an arrangement so that all the heat coming from the sun is concentrated at one point. The point will serve as the source of heat

CHILD : How will we do that ?

Ans. : Take a lens and burn a piece of paper by focusing the sun rays (it can be shown in the school playground).

CHILD : How do we burn the piece of paper ?

Ans. : The sun rays get focussed at one point and burn the paper. Similarly, solar energy is being used to make solar heaters, solar cookers, etc., by focussing sun rays.

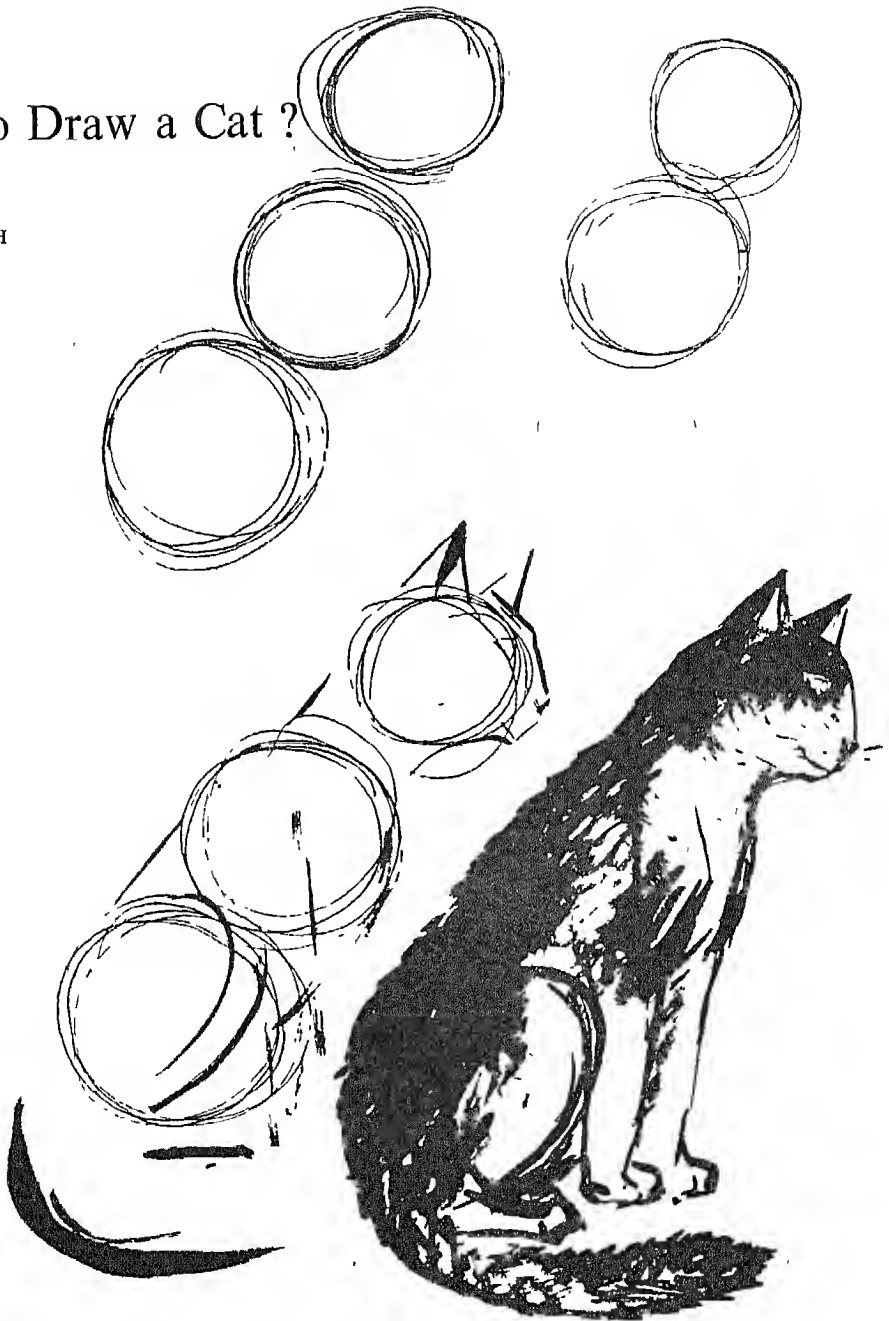
So, we see how the natural source, the sun, is of so much use to us.

It is, therefore, the teacher's responsibility to develop and canalize the child's inquisitiveness through similar types of questions and answers on different problems.



How to Draw a Cat ?

K. C. WAGH
NCERT



You must have seen a cat, isn't it ? May be you have also tried to draw it, specially a cat running after a mouse. If not, try it out this time. The instructions are here. We have different postures with easy to follow instructions.

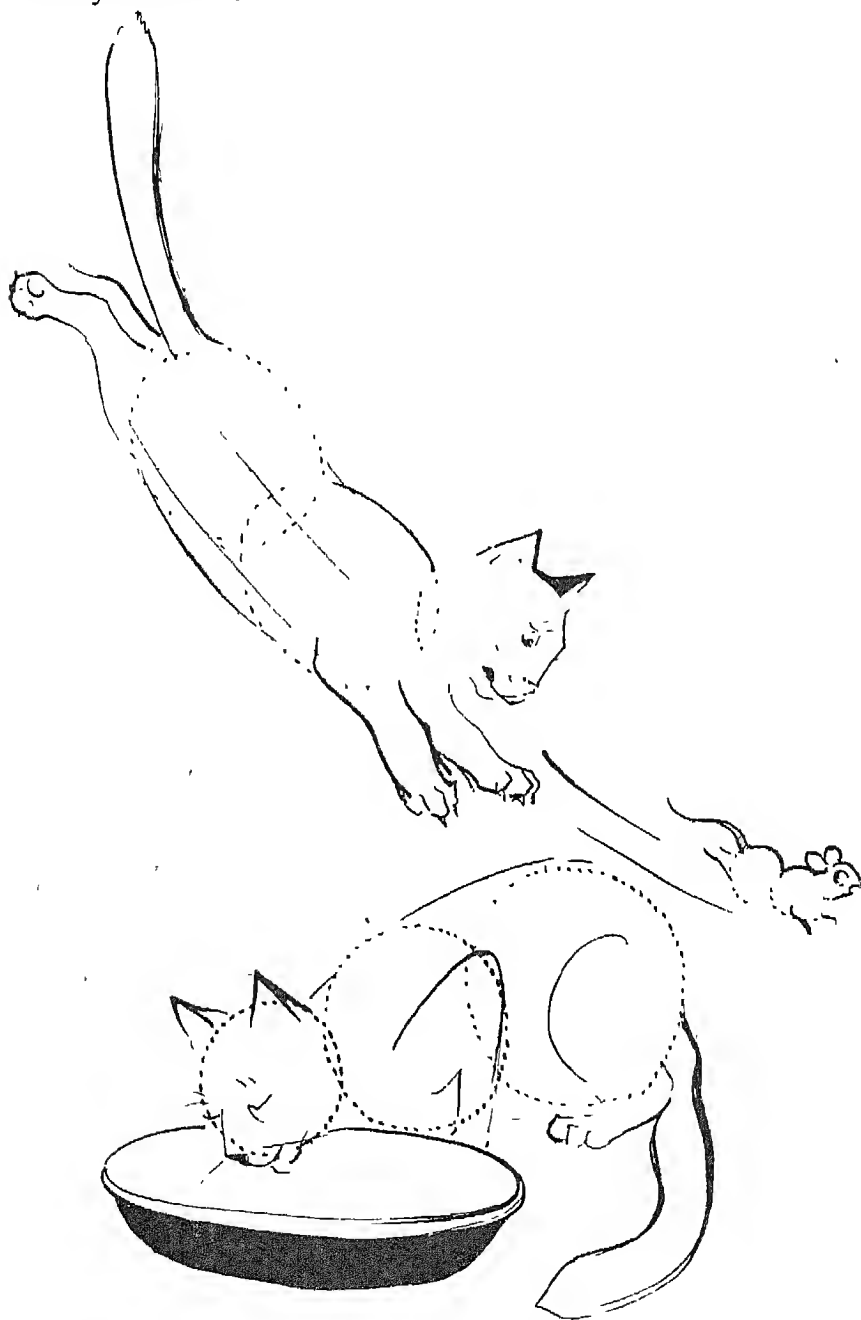
In the above illustration you can see a cat sitting. First draw three circles as given in the figure. Draw the second circle bigger than

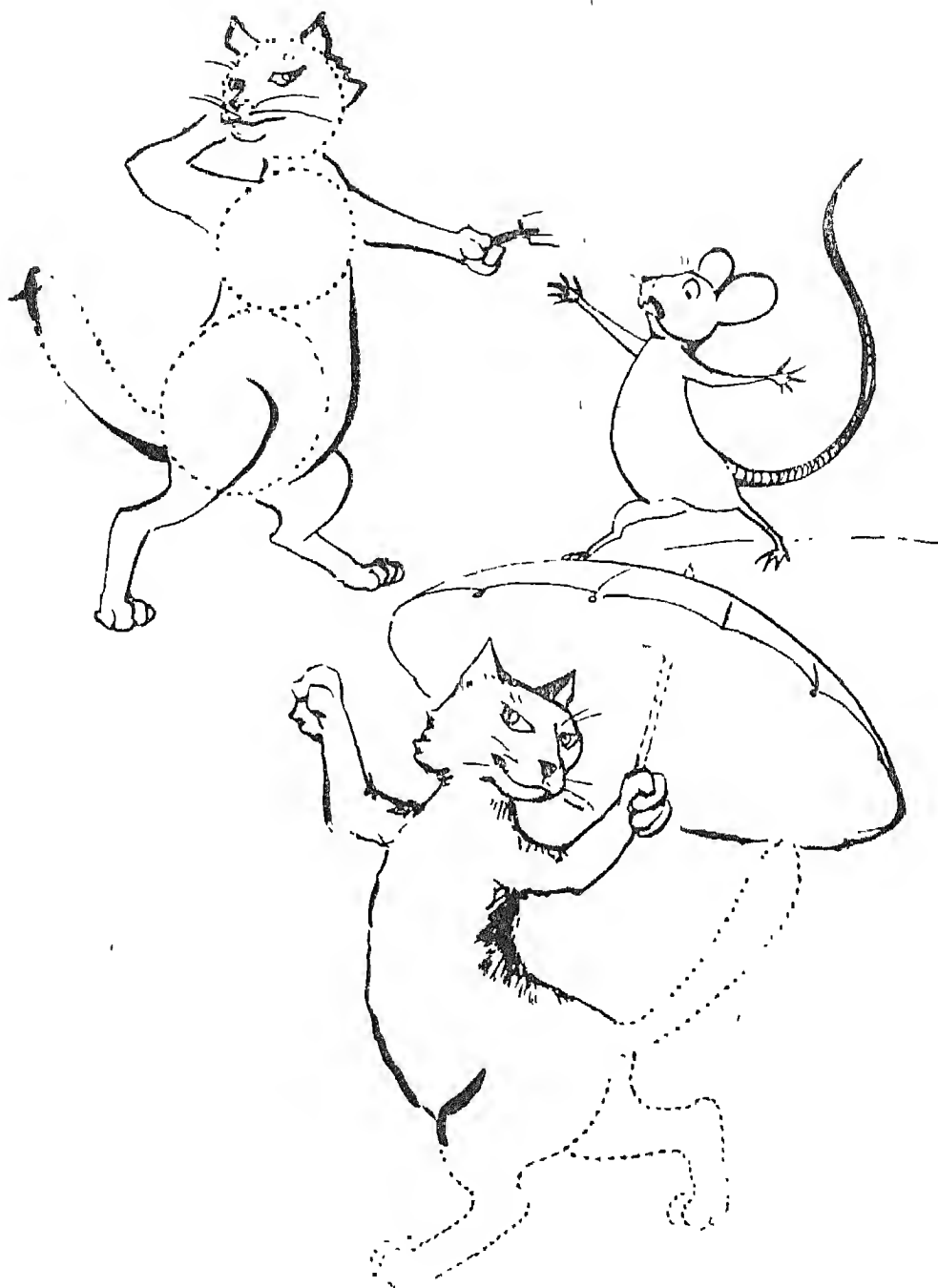
the first and third one bigger than the second. Draw an arc below the biggest circle indicating the tail of the cat. For ears, draw two slanting lines from the two ends of the smallest circles. Now see the figure and complete the body of the cat. Apply strokes with a brush using black ink as shown here. Also draw eyes and mouth and the cat is right there.

In the illustration given below you can see a cat peeping into a big vessel and looking at a kitten inside it. To sketch these two, again you have to draw three circles of different size and add the features etc., as earlier. Then give finishing touches using some ink and a brush.



In this illustration the cat is chasing a mouse and the other one is drinking milk from a shallow vessel. This time after you draw circles of different size, you will have to draw the eyes, ears and tail rather carefully to indicate the actions shown here.





Well, we all know that neither does a cat carry an umbrella nor does it call a rat offering icecream to it. Still we have just shown the cat in these poses here. Once you learn to draw the cat properly you can very easily draw these sketches.

Teaching Reading through Dramatization in Primary Classes

P. R. SALUJA
Primary Teacher
Kendriya Vidyalaya
Nasirabad

DRAMATIZATION is, of course, a practical aid to learning. It does everything for the pupil which the reading of a book alone cannot do. Keeping in view that dramatization helps the pupils to study words and sentences intensively and carefully, a few lessons from the English Reader for class IV, for example, What Happens to our Letters; Hospital; Lion and the Fox; An Experiment; A Fight with a Tiger; W.H.O.; Half the Price I, II; The Nightingale, etc., were taught with the dramatization method. Almost all these lessons are in the dialogue form. Thus, the different types of structures were easily memorized by the students when they were learning these lessons in the play form.

Generally, children like to play. They have the desire to be active. They happily engage in activities which have the characteristics of a play. Dramatization is also a 'play way' method and it has been found quite interesting in the class.

Again, in Class IV we have a book 'Good Reading Book I'. In such books of stories, dialogues and phrases which are often repeated are very much liked by the children, but, often, the interest of the children is marred by stereotyped reading of lessons which leads to dull teaching. If the lessons are made interesting and lively through the dramatization method, the students will continue to be eager to learn.

Dramatization in different forms

1. *Story-telling* : This device was also adopted to keep the pupils alert and attentive. While narrating a story, the teacher kept the following points in mind :

- (i) The story had carefully graded vocabulary.
- (ii) The story was thoroughly prepared beforehand to make it akin to a play.
- (iii) The stories contained in the book 'Good Reading Book' proved more effective.
- (iv) The stories were quite natural and informal.
- (v) The stories had plenty of repetition and conversation in them.
- (vi) Dialogues were read with actions and emotions.
- (vii) Children generally paid attention towards dialogues and emotions.

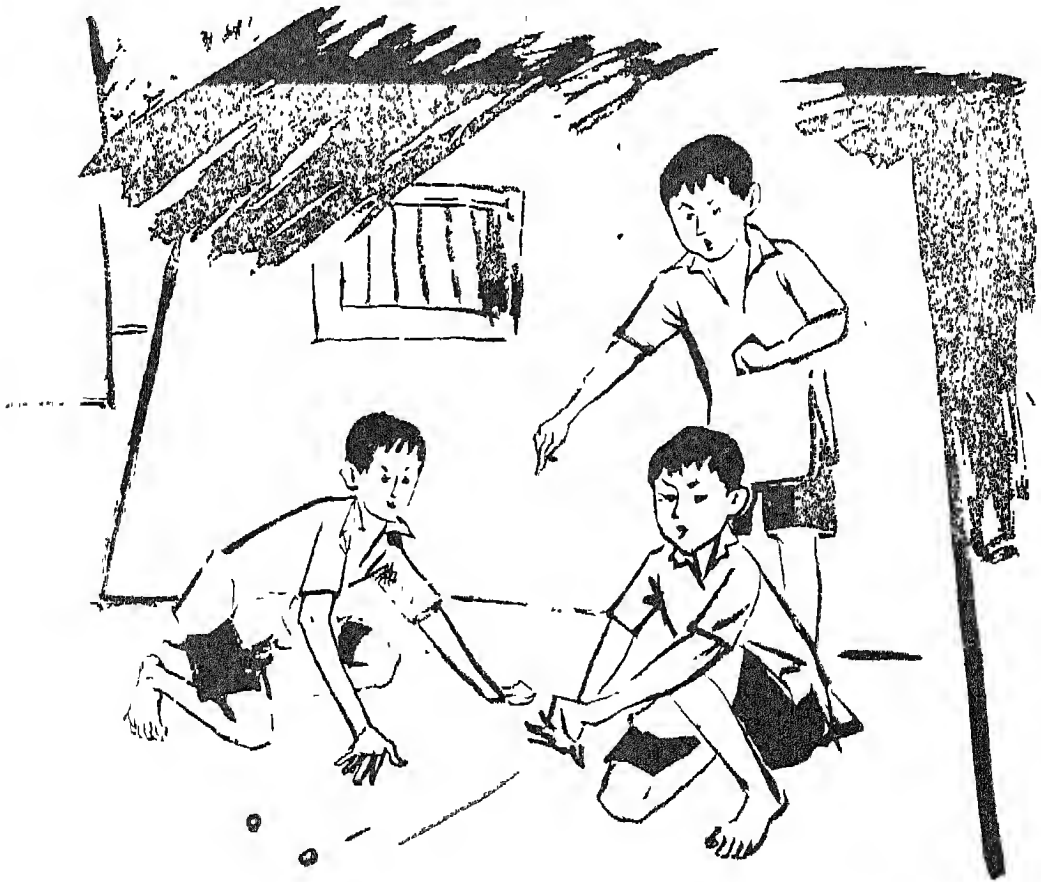
It was noticed with great satisfaction by the teacher that the stories which the teacher taught in the class in this manner did

develop among the students the feeling of identification with the characters of the stories and this made them accept this new teaching-learning method with great enthusiasm.

The teacher also encouraged the students to tell stories. Some children took it as an opportunity of pride and satisfaction of standing before the whole class and narrating stories. It is felt, story-telling will finally lead children to participate in various activities such as conversation, reading, handwork, dramatization, etc.

Dramatization is a recreative experience. Drama is 'doing', and education is 'learning by doing'. It follows that drama in itself is a means of education. This innovation was also practised so that the less confident and shy pupils also might have ample share in reading in the class through action-reaction dialogues. It leads to memorizing of short passages, bodily activities and team-work which are all very interesting to the children.

Some other kinds of situations and incidents which were



found suitable for dramatization and can be useful in primary classes are as follows :

- (i) Dialogues between two persons (say, the father and the son, the post-man and the receiver of letters, the teacher and the taught, etc.) or between two animals (say, cat and rat, rat and lion, monkey and crocodile, etc.)
- (ii) Incidents from real life such as a boy buying fruits, vegetables, etc.
- (iii) Short plays to teach some simple rules of health, conduct and manners, etiquettes, etc.
- (iv) Historical plays at the primary level should be

simply designed to impart to the students elementary knowledge of the subject. Not only the talented but also weak students should equally participate in this activity.

In brief, teaching-learning through dramatization is not only effective and fruitful but it also provides opportunities to the pupils for team-work. While acting in a play, they act together keeping in mind the common end. For instance, some play the role of actors, some prepare the scenery, some make general arrangements, and there are some who act as supervisors pointing shortcomings and giving suggestions.





DHAKA LAL GUPTA
3/7 Manchand Building
Shastri Bazar
Delhi Cantt

EDUCATION is not merely learning alphabets; it should seek to develop fully one's inherent potentials. At times, an illiterate person may be more cultured and practical than a neoliterate, because he has had his education through the school of life, by keeping his eyes and ears open, thereby making a mental note of his observations. Whereas a neoliterate has merely

learnt what has been taught in the classroom without giving much thought to what happens around him.

So when we view education as an overall development of one's mental faculties we will say that a person who approaches life with an open mind and who satisfies his inquisitiveness through the process of learning, is educated in the real sense of the term.

By nature the child is inquisitive. He gets his first lesson when he starts asking his parents a variety of questions to satisfy his curiosity. He also likes to copy elders in order to become like them. At this stage the parents should not get irritated; instead, they should try to satisfy the child's curiosity to the best of their knowledge. And so should do the teachers. On several occasions teachers have been observed scolding children unnecessarily and beating them badly, simply because of their persistence in asking questions either general or relating to the lesson being taught in the class. This is indeed an unhealthy attitude on the part of teachers which creates a fear complex among the children. Their mental faculty gets suppressed and they simply cannot understand what the teacher is teaching. The teacher therefore, should take all care to see that if a child does not understand a particular thing, he should try to explain it again and again till it is completely understood by that child. Scolding helps none, neither the teacher nor the children, it may even make the child drop out from the school.

Many a time the teachers themselves pronounce different words wrongly, so would do his students. The teacher should always try to be correct and thus avoid developing wrong habits in the students.

Small children need to be taught about health and hygiene. The teachers must never taunt

the child about dirty clothes, nails or hair but try to tackle the situation sympathetically and practically. They should tell them the benefits of keeping clean, washing their hands before taking food, taking bath daily and not to eat exposed food.

Some teachers do not like the students to sit together and talk. Well, surely, they must not talk incessantly and create confusion. But they should always be encouraged to exchange their views through properly organised discussion, this will help their mental development.

Children are also good at making friends. They choose their friends easily. The teachers should not stand in their way, if it does not interfere in their learning in the classroom.

The teachers must teach his pupils according to their level of grasping. Some children learn easily by listening to the teacher whereas others learn better with the help of illustrations. Illustrations also make permanent impressions on the child's mind. So wherever feasible the teachers should make use of these. They should also take the children on field visits to factories, parks, religious places, museums and other historical places to help them learn well what is taught in the class. Field visits should be an important part of the curriculum.

The teachers must also pay attention to children's handwriting. Now-a-days, short cuts to

everything have become a way of life. Everybody wants to get the most with the least of efforts. The television has become tv., and so on. The children, too, are not free from it. The earlier method of writing with holders and *kalam* has been replaced by ball pens. The teachers must pay

attention to this end and give proper attention to the students' handwriting.

These are some of the suggestions which, though very common, can have great impact on improving the student's level of understanding and his education as a whole.

THE WORD 'Examination' is a terror for children. Not only in the lower classes but in higher classes also children do not appear to be ready to take any examination. The educationally backward children or those who have no interest in studies take examination to be an impossible task. It is true children shudder at the very idea of examination; nevertheless, an intelligent teacher can turn it into an easy and pleasant task, if we bear the following points in mind.

Command on the curriculum

We are all aware that the teacher should know about the books he has to teach in the classroom. He should study the syllabus well and also distribute work month-wise. There is an arrangement according to which the education department furnishes, with or without cost, the syllabus monthwise and the teacher is expected to follow it. But to prepare a rigid rule like this is not healthy. If the classteacher or the headmaster feels that the syllabus should be arranged on different lines, he should be given freedom to do so. It is important from the point of view of preparing children for examination. Further, there should be less work-load in the first two or

three months. This would help children to learn easily, systematically and in a balanced manner.

Teaching Plan

As soon as the session starts, the teacher should begin his work without any delay. If the work is started late, the teacher is not in a position to finish the courses of study and thereby creates problems for children. Most of the books are prepared according to a given system. For example, lesson 1 is followed by lesson 2 which is taught in ascending order of difficulty. The teacher can also make his own arrangement according to the difficulty level of a lesson. The teacher should use his intelligence and imagination to see that lessons are taught on the principle of 'from easy to difficult'. For examination purposes, unimportant lessons can be divided and questions with their corollaries can be given for practice. In this way, children can be kept ready for any future examination.

If both teaching and practice for examination are carried out simultaneously from the beginning, children are likely to shed their fear of the coming examination. However, there should be a note of caution on this point and children should not be made to feel that they are taking any examination. If this kind of practice is conducted in the classroom, it is always healthy. Children will thus get used to examination

and they would not avoid it as an uninteresting or fearful exercise.

Writing Practice

It is essential that all children are given writing practice daily both in the classroom and also as part of their home work. Under the present system of education written examination starts from early classes. Oral examinations are also given but they are of negligible nature. Thus, writing practice is another important factor in preparing children for examination.

Even as it is, the practice of writing has several advantages. Firstly, whatever a child learns leaves a permanent impression on his mind particularly when he puts it in writing. This impression is not easy to forget. Secondly, writing practice improves the speed of writing. And thirdly, it improves the quality of handwriting. A good hand has its own importance in life.

Periodical Examination

A new dimension to learning to overcome the fear of examination can be added by arranging weekly, fortnightly and monthly tests. These tests are likely to create new interest in children. Children would also get used to the practice of examination without any fear.

Periodical examination is also, in a way, a step towards regular evaluation. In these periodical tests children are likely to face

certain difficulties and these should always be resolved by the teacher. For example, if a child is not able to recognize, for some reason, the plus or minus sign he should be helped by the teacher immediately, because it is likely that this confusion on the part of the child may prevent him from doing a sum correctly. The child may need similar guidance in other subjects also. Therefore, at the primary stage particularly such directions and guidance should be provided liberally, so that as children advance in studies they develop self-confidence and pursue further course's studies on their own.

Recapitulation of the Syllabus

For any examination, it is not sufficient either for a teacher to teach, or for a student to read, a lesson only once. May be, because of a large number of holidays or other reasons, it is not possible to complete the syllabus. Nevertheless, every effort should be made to revise what has been taught. Recapitulation of the lessons taught and learnt is, therefore, very necessary. This enables the children to keep themselves ready for examination.

Removal of Imaginary Fears

There is a class of children who suffer from imaginary fears about examination and, thus, unconsciously get terrified at the very mention of examination. When a child lags behind his other friends in reading or writing, his friends make fun of him. Even his parents get so disillusion-

ed that they condemn him as brainless etc. They further frighten him by telling him again and again that he is not going to pass the annual examination. This is how a child builds up imaginary fears, resulting in his nervousness, indifference to studies, absenting from the school and abstaining from taking examinations.

Thus, both the teachers and parents must join hands to make the children fearless and build in them the kind of self-confidence that is a must for successfully and happily passing through any examination in life, whether at school or outside.

SADA RAM MACHLI
Asstt. Teacher

Primary School, Dandavan, Bastar (M.P.)

THE present education system in our country is a legacy of the British educational policy which primarily aimed at inculcating love for and interest in, western culture and white-collar jobs. Modern India, however, needs an educational system that may help solve our basic problems of large-scale poverty and unemployment. Uniformity of primary education curriculum all over the country is, therefore, the first necessity. Besides, there should be a sort of coordination between the school curriculum and the social environment so that a child, soon after he completes his schooling, may be in a position to take up a job in accordance with the competence and training he receives at school. The child should not feel alienated when he leaves the school and enters the world of work.

Curriculum change

Only the mother tongue or regional language should be taught in Classes I and II, with the addition of practical subjects in Class III. Half of the school time should be devoted to the teaching of prescribed books and the other half to creative activities. The medium of instruction should be the mother tongue.

The number of lessons in each subject should be minimum for Classes III to VIII. Only the necessary and useful subjects should be taught at this level. Pro-

per lessons in history and civics should be included in Hindi literature or regional languages. Efforts should be made to encourage the use of Hindi in non-Hindi speaking areas through activities like prize competitions in each class. Hindi should be made compulsory as the national language as a step towards making it an international language in the near future. Unnecessary and knotty sums should be excluded from the mathematics curriculum to make it more related to our day-to-day life. If the government accepts the English numerals as a national system, these, and not the Hindi numerals, should be used in all books from the very beginning. Geography should include knowledge of the district in Class III, the state in Class IV, the country in general in Class V, the country in detail in Class VI, the world in general in Class VII, and the world in detail in class VIII. Map-work should be made compulsory.

Good knowledge of primary health and general science should also be imparted to the students up to Class VIII through practical experiments. Besides, basic knowledge in art and drawing may also be provided.

Practical Subjects

Facilities should be provided in Classes III-VIII for preparing marketable articles out of the locally available materials and resources for daily use and consumption. For instance, things like boxes, baskets etc., could be prepared from different types of wood. Similarly,

earthen, rubber and plastic toys could be prepared. Chalk-making, pottery, weaving, spinning carpet making, candle-making etc, are some of the the items that could so be taken up in schools. Besides, efforts should be made to impart allround training in agricultural activities with thorough understanding of agricultural equipments and basic skills involved in electrical work, sewing, weaving, embroidery, handloom, soap-making, caning, photography, block-making, transistor and radio-making. Simple and inexpensive machines should be made available for all such activities and sufficient grants-in-aid and loans be given to every school for the same. Proper accounts should be maintained in every school which may be thoroughly audited by senior officers to ward off the scope of corruption of any kind. To encourage good work, annual prize competitions should be arranged. Peripatetic training schools should be established and skilled workers be employed to train teachers.

Games and sports, scouting, physical training, etc., should be organized systematically.

Special attention should also be paid by the government to improve the general conditions of school buildings.

All primary schools should have classes up to standard VIII which should be compulsory for all children.

Thus, starting with the restructuring of elementary education, basic changes should be introduced

in higher classes, including colleges, which could be converted into industrial training centres. This would make every school and college a kind of workshop turning out skilled workers ready to be absorbed in the employment market. Students' working on the farms and in the fields would also solve the problem of farm labour and agricultural production would increase. This is how the problem of poverty and unemployment could be solved, the twin aims of the new educational system,

LUXMI KANT MISHRA
Headmaster
Basik Siksha Parishad
Municipal Corporation
Kanpur

Every being in the universe shares equal right and is busy in doing his duty in accordance with his understanding. Everyone reaps the reward of his actions. Human beings get together to make a family, a village, a city, a country and the world. It is true that everyone has importance of his own. It is possible that a machine may somehow continue to work despite a loose screw or a loose part somewhere. But such a situation can result in a mishap

at times. That is why the engineer tightens the screw or replaces the defective part of the machine without much loss of time. This speaks about the value of a small screw. On this analogy, the value of man as a part of the universe is equally great.

It is commonplace that we blame the society daily without realizing that we are also its part and parcel. We do not realize as to what we are doing or whether we are doing our duty properly. We soon criticize the students and other members of the society for setting buses or shops on fire, derailing trains, and similar loss on account of mob violence. But have we ever cared to see that our sons or brothers are also among them? Have we ever stopped these people from incurring national loss?

A millowner can never tolerate the setting up of a new factory by one of his employees, and a money-lender can never see one of his debtors getting richer than he. It is only a teacher or a parent who always wishes much greater heights of success for his children. Herein lies the greatness of the teacher.

Every child is essentially influenced by the qualities of his parents and teachers which are reflected in their day-to-day behaviour and activities. Every act of a teacher does create an impression on the child. However, a child is never under the charge of a single teacher. He has to be with a number of teachers during his school life. All these teachers leave some impressions on the child and,

as such, their collective influence goes to make the child what he is.

Every teacher influences every child. A potter designs different types of pots from the same material; he can mould the clay into different shapes as he wishes. But the teacher has to deal with human beings, not with inanimate things. He has to develop their intelligence and help them to be constructive and creative. In fact, the entire progress made in the world is the contribution of teachers through their students.

The teacher has, therefore, always to be cautious about his behaviour and activities because his students, consciously or unconsciously, learn to emulate him. The teacher has also to keep in mind that the students form an important part of society who have to contribute their share to its future development.

Thus, the future of the child and the society depends on how the teacher conducts himself in school as well as outside.

M.D. PANDEY
A-6, S.V.M. Colony
Najafgarh Road
New Delhi



Who is a Good Teacher ?

It is needless to say that the level of education ultimately depends upon the competence of a teacher, whatever may be the

structure of education. The teacher must be capable enough to make the efforts of educational planners successful. He is the one who comes in direct touch with the students and can mould the young minds towards the continuous path of learning and progress.

An able teacher is like a friend whom the child can trust and approach without any inhibition in case of his doubts or difficulties.

Sound character is of utmost importance for a good teacher. If a teacher lacks character, his students also may go astray because the young minds are easily moulded in the shape they are put through.

Patience is another important quality of a good teacher. If he gets irritated easily, the students will hesitate to come to him with their problems. This may affect the teacher student relationship. There can be many problems in the teaching profession too. The teacher should be able to deal with them patiently. Then only can he reach the root cause of a problem and find a proper solution to it.

Full faith in, and complete devotion to, the profession are a must for a teacher. He should be true, and dedicated to his task. If he does not believe in the nobility of his task and does not understand his responsibilities, he can never be a good teacher.

Taking up teaching as a mere profession and without proper dedication cannot make one a good teacher

A teacher who does ample reading can only have vast knowledge. He must keep himself fully informed of the latest development in his own sphere of knowledge. Then only can he be in a position to transmit up-to-date information to his students.

Self-control is another important quality of a competent teacher. Through it, he can very well maintain discipline in the class. At the same time, he should also be kind-hearted and treat every pupil as his own child.

To be able to judge every situation in a balanced manner, the teacher must always be broad-minded. Partiality brings bad feelings among the students and they can never come up to the mark. All the students should be treated equally by the teacher.

Nothing is like the pleasing personality of a teacher. Pleasantness in his behaviour makes the students feel free and they attend to their lessons with an open mind. This way they learn better and grasp more.

The most important of all is, of course, the compatibility between what the teacher says, what he is, and what he does. Whatever he teaches his pupils, he must first follow it himself if he really wants

his students to learn something from him. He must never tell lies. If he advocates no smoking, he himself must not smoke in the presence of his students. Similarly he should not do anything which may be bad for the pupils to emulate.

A good teacher will always try

to make good students. Many may have inborn qualities of a good teacher and many may cultivate them later.

ASMAT HUSSAIN
Assistant Teacher
Islamia Urdu Middle School
Lohardaga, Ranchi



Experimental Research on Moral Education Work of School Children in the USSR and India

THE USSR Academy of Pedagogical Sciences has conducted research into school children's moral development under the leadership of Academician I.A. Kairov and Dr. O.S. Bogdanova.

A methodological guide entitled *An ABC of Moral Education* has been prepared and tried out since 1970 on experimental basis in the primary schools of Taganrog, Moscow, Riga and Voronej, says Unesco's *Innovation*. Some of the general findings are as below.

At the beginning of the school year, the moral behaviour of children in experimental and control classes was about the same; more than half of them (53 per cent in experimental classes and 55 per cent in control classes), faced with a moral choice, would not help a classmate if to do so ran counter to their own interest. By the end of the year, in the experimental class, only 17 per cent of the children, when faced with such a choice refused to help their classmates, while an absolute majority of them would show concern, kindness and helpfulness towards their classmates.

The development of moral concepts in children in experimental and control class was almost identical but, in about class III, such concepts were found to be more substantial in pupils in the experimental classes than in the control classes. The gap between a clear concept and behaviour was smaller in the experimental classes than in the control classes.

The younger (Class III) pupils' perception of children's feelings was studied on the basis of a description of their actions and of their facial expressions. The children's level of perception of feelings aroused by the description was higher in the experimental classes than in the control classes.

The work of developing moral qualities in Class I pupils was done mainly in the class, but some work was also done out of the class, in clubs, where they could make many and varied contacts leading to the development of feelings of mutual kindness, fair play and friendship. The parents and chief pioneers also took part in this. The children came to know each other better and acquired a taste for teamwork, games, discussions and thus laid foundations for real friendship and genuine pleasure.

Teaching content became more complicated in Class II. The notion of kindness was dealt with more thoroughly, further ways of showing it were worked out, new moral notions were formed—friendship and comradeship—together with the corresponding behaviours. Class II pupils acquired clear ideas of kindness, tact, sympathy and fair play. They carried out socially useful assignments in school and learned to control their desires which were contrary to the collective interest, they learned to sympathize with their classmates' failures and to form friendship soon the basis of common interests and mutual respect.

Class III dealt with more difficult problems. The level of moral education achieved by the pupils at the end of Class III showed the effectiveness of the whole system which had the following characteristics: the children enjoyed meeting together, acting together, taking their own decisions about the action which was necessary and useful to the collectivity; they acquired initiative, sought and found useful work, were ready to help their classmates and sympathized sincerely with any of the classmates' failures.

The system of experimental education gave positive results in the moral development of pupils in the most junior classes.

The ABC of moral education is now the vade-mecum of many primary school teachers in the USSR.

India

An exploratory survey undertaken by DR. B.R. GOYAL of the NCERT on moral education programmes in higher secondary schools of Delhi has also identified eleven broad values for moral development and character formation of school children. These are: Community feelings; cleanliness; integrity; patriotism; dutifulness; sympathy; self-discipline; truthfulness; punctuality; orderliness; and dignity of labour.

Such values are developed through activities like school prayer; talks on moral themes; celebration of special days; literary activities, cultural activities; project work, cleanliness activities; recitation from religious scriptures; communities services—within the school, auxiliary activities; community services—out of the school; tutorial classes; physical exercises; sports and games; formal teaching in specific periods; and library readings.

Educational Policy : A Redirection

THE main thrust of the proposed national education policy is to have the regional language as the medium of instruction at all stages, except the primary where it would be the mother tongue. This is basically to eliminate the elite nature of English-medium public schools. There is also emphasis to promote Hindi as a link lan-

guage and to infuse in the vocationalisation programme the element of decentralisation of economic planning.

The draft national policy on education, which the Union Education Minister P.C. Chunder presented in the Lok Sabha, asserts that the present system must be reorganized "in the light of contemporary Indian realities and requirements...The system must endeavour to narrow the gulf between the educated classes and the masses and overcome the feelings of superiority, inferiority and alienation".

The document suggests that the Union Government review the implementation of the national policy every five years, and modify it in the light of experience.

In elementary education the policy documents want the highest priority to be given to free education for all up to the age of 14 as laid down in the Directive Principles. The content of elementary education should include language, arithmetic, history, simple elementary sciences with special reference to the environment, cultural values and physical education.

Regarding the educational structure, it will broadly comprise elementary, secondary and undergraduate stages of education.

Compensation for Child Education

Dr. P.C. Chunder, Union Education Minister, showed his willingness for the provision to compensate poor parents for taking their children off work so that they could attend school

The Minister had earlier stated that socio-economic problems not confined to education were responsible for children not remaining in school despite the availability of physical facilities.

Dr. Chunder said new five year plan provided for more schools, for free meals and free uniform and for socially useful productive work in the curriculum. These provisions were intended to make parents consider that the education of children was useful.

Books of All Languages under one roof

For the first time, book-lovers of Delhi, irrespective of their language, will be able to gather under one roof to pick up the reading material of their choice.

The opening of the Regional Languages Library, a branch of the Central Secretariat Library at Tulsī Sadan is the first attempt in India to meet the reading needs of all linguistic groups at one place. The Central Hindi Library, the Central Sanskrit Library, the Regional Languages

Library and the Indian Classes Library will also be based at the Tulsi Sadan.

The Central Hindi Library, besides having books in Hindi, will also have books in Maithili, Dogri and Rajasthani, running into 13,000 volumes.

So far, only the 14,000 members of the Central Secretariat Library can take the books out for home reading. The facility will soon be extended to the general public.

New Method of Teaching Evolved

SHRI M.V. Gopalakrishnaiah, a freedom fighter and professional teacher, said in Hyderabad that he had decided to devote the rest

of his life in conducting research into new methodology of teaching so as to reduce the years spent by a pupil in the school and at the same time learn all the three languages as well as social and general sciences easily without feeling any burden.

He claimed that through innumerable demonstrations he had proved that the existing direct method of teaching languages was cumbersome and wasteful of time and energy. He had evolved a new 'co-relative' method which he intends to popularise. He hoped that educationists and authorities at the state level and at the centre would encourage him with funds and facilities in his endeavour to realise his aims. □



SCHOOL SCIENCE

A QUARTERLY JOURNAL OF SCIENCE EDUCATION

Published by the National Council of Educational Research and Training, *School Science* is a quarterly journal of science education.

School Science is an open forum for discussing science education in our schools, its problems, prospects and individual experiences of teachers and students.

Besides the educational aspect, *School Science* contains a stimulating feature—Science News, which introduces the frontiers of science to the teachers and the curious students. Among other regular features, *School Science* presents profiles of famous scientists. Julian Huxley, T.R. Sheshadri, Amedeo Avogadro, Jacques Monod, Lev Landau and Werner Heisenberg have so far been covered.

We invite the practising teachers and their students to present their problems and findings in the pages of *School Science*. There is a section reserved for the students, where they can communicate with teachers and students in other parts of the country.

School Science, you will notice, is meant both for the teachers and their students. It is meant to make learning and thinking a joyous process. And the most important thing is your participation in it.

JOURNAL OF INDIAN E D U C A T I O N

The *Journal of Indian Education* is a bi-monthly periodical published by the National Council of Educational Research and Training, New Delhi.

The purpose is to provide a forum for teachers, teacher-educators, educational administrators and research workers, to encourage original and critical thinking in education through the discussion of current educational views, and to promote the development and improvement of educational practice. The contents include articles by distinguished educationists, challenging discussions, critical analyses of educational problems, book reviews and other features.

Manuscripts sent in for publication should be *exclusive* to the *Journal of Indian Education*. They should be in duplicate, typed double-spaced and on one side of the sheet only, addressed to the General Editor, *Journal of Indian Education*, Journals Cell, NIE Campus, Sri Aurobindo Marg, New Delhi-110016. Contributions accepted are paid for on publication.

The views expressed by individual authors are their own and do not necessarily reflect the policies of the Council.

Copyright of manuscripts published in the journal will vest in the NCERT and no matter may be reproduced in any form without the prior permission of the Council.

Published by V. K. Pandit, Secretary, National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi-110016, and printed at Everest Press, 4 Chamelian Road, Delhi

General Editor : Prof R. P. Singh

The Primary Teacher is a quarterly brought out by the National Council of Educational Research and Training, New Delhi.

The journal intends to give to the practising teachers and concerned administrators authentic information about the educational policies being decided on and pursued at the Central level. It aims at giving meaningful and relevant material for direct use in the classroom. It would carry announcements of programmes, courses of study, etc., offered at various centres in India from time to time. It also provides a forum for the discussion of contemporary issues in the field of education.

The major features of *The Primary Teacher* are :

1. The educational policies concerning primary education
2. Questions and answers
3. States round-up
4. Illustrated material for classroom use

Subscription : A copy of the journal costs Re. 1.00. Annual subscription is Rs. 4.00.

Contribution : Articles and papers written by school teachers either in English or in Hindi are welcome. Each published article would be paid for. Two typed copies of the article should be sent in for consideration.

The paper used for the cover and text of this journal is a gift from the Unicef

General Editor : Prof. R. P. Singh

Academic Assistance : D. N. Khosla

Production : C. N. Rao
Chief Production
Officer
: Kalyan Banerjee
Production
Assistant

Assistant Editor : P. K. Yadav

Editorial Assistant : Archana Sood

Artist : Wagh

Please send your subscriptions to
Business Manager
Publication Department
NCERT, NIE Campus
Sri Aurobindo Marg
New Delhi-110016

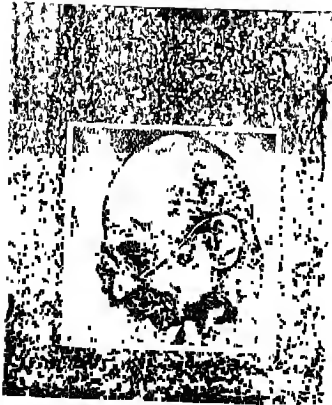


THE PRIMARY TEACHER

Vol IV No. 4

October 1979

EDITORIAL	..	3
Children and their Education in Asia		
<i>Raja Roy Singh</i>	.	4
Helping the Child to Become Human		
<i>Margret Verma</i>	..	10
When the Teacher Became a Student		
<i>N Subramanya</i>	...	15
<i>(Sankhyapi tiya)</i>		
Do Your Duty		
<i>(Excerpts)</i>	...	18
Teaching of Languages at Primary Levels		
<i>V N. Sharma</i>	...	24
TEACHERS WRITE	...	27
NEWS & VIEWS	...	35



Cover : Kalyan Banerjee

By education I mean an allround drawing out of the best in child and man—body, mind and spirit. □

I have always felt that the true textbook for the pupil is his teacher. □

When it is remembered that the primary aim of all education is, or should be the moulding of the character of pupils, a teacher who has a character to keep need not lose heart. □

Gandhi Ji

LANGUAGE TEACHING IN PRIMARY SCHOOLS

LANGUAGE TEACHING at the primary level is of great significance. Before a child learns to express himself or appreciate the written word he has to be initiated to the written idiom which is considerably different from the mother-tongue he must learn. The valid question, therefore, is how far can a child learn both. Few homes in India could boast of speaking the language of the book. Both in villages and urban centres, one comes across children aged five or six speaking two standard languages—one the dialect and the other, the school language. Luckily children are gregarious and not emotionally so involved that they feel the pinch of alienation. One or two languages, therefore, create no serious problem for them. They learn easily and naturally anything that comes to them provided the teacher is knowledgeable and effective.

Language books unfortunately are not all that perfect. Seldom do they cater to the psychological needs. They are either so different from the home environment or are so removed from reality that

language learning becomes an effort, an ordeal. Instead of bringing the child close to society he lives in, they turn him away. One could appreciate the difficulties in writing books that are perfect but this minor fault could easily be repaired by the teacher who knows where and when to assist. At the primary level, teachers are mostly local and they tend, therefore, to making the standard language dialect. It is a dangerous training which has serious repercussions at the higher stages of learning. The language defects of the teachers thus get reflected in the basic learning competencies of the children. Therefore, there is a need to be extremely cautious about the language the teacher wishes to teach the children. The sound principle in this case would be to gradually wean the child away from the dialect he speaks and put him on the language he must speak in the cultivated circles. It is a delicate job which the teacher must take care of. But before he does so he himself must speak and write the cultivated tongue. □



*The following is an address by Shri Raja Roy
Singh, Director, ¹Unesco Regional Office
for Education in Asia and Oceania*

I SHOULD LIKE at the outset to make clear the qualifying reservations to which my presentation is subject. In a continent as vast, varied and complex as Asia is, any single description of the educational situation cannot possibly

hold for all areas in the region. My presentation is therefore no more than a thumb-nail description of the general characteristics of the educational situation as it may be found in relation to the largest number of children in the

continent, mostly in the developing region. The educational situation refers to the early or initial stage of the educational process.

The traditional image of Asia is one of wise old people. But Asia is more than any other continent, demographically speaking, a continent of children and of young people. This will continue to hold for most of Asia for many decades to come. It is, therefore, not a mere catchy slogan to say that the future will be made very much by what the children and young people are helped to make themselves.

The twenty-five countries in the region of Asia and Oceania have a population of a little more than 2.4 billion (or 2,400 million) of which 383 million are in the developed and industrialized countries, and the remaining over 2,000 million in the developing countries. Sixty-one per cent of the total population of the world is in this region. Of the total population in the developing countries of the world 72 per cent are to be found in the developing region of Asia. This population is growing currently at the rate of 2 per cent per annum.

In the 21 developing countries in Asia, children and young people under 15 years of age form 39.1 per cent of the total population (in contrast to developed countries where it is 25.5 per cent). In the age-group 6—11 years, the traditional span for the first level of education of children, the population has been increasing at

an annual average rate of about 6.5 per cent. This is a quite high growth rate, and means doubling of the school-age population in the 6—11 years group in a little more than two decades.

The provision of educational opportunities for children, whose numbers and needs are growing exponentially, has been one of the important areas of national endeavours in the Asian countries. We still do not have statistics for certain countries in this region, but we can obtain an idea of the educational progress from the available statistics for 18 countries in the developing region of Asia. Around 1965, there were about 83 million children in age-group 6—11 in school; by 1976, enrolment increased to 120 million, and currently it is estimated to be around 130 million. This means that currently about 63 per cent of the children are in schools and 37 per cent of the children are not in school. The general picture which emerges shows that despite the tremendous effort put forth by the national government, there are in the developing countries a large number of children who have no access to school. Considering the growth rate of the population, one can venture the statement that with the present pace of expanding educational opportunities, the number of children out of school will grow rather than diminish.

The legal entrance age to formal schooling varies from 5 years to 8 years. In most countries



Photo Courtesy CET

it tends to be 6 years. In a few countries, especially the developed countries, preprimary education or early education is expanding very rapidly. In the developing

countries, however, public provision of facilities for higher education is on an extremely limited scale because of financial constraints. Educational opportunities

for children in these countries mean in effect facilities for primary education. In the developing countries, the situation varies considerably from one country to another. In four countries which have a population of about 13 million children in the age-group 6—11, universal school is now achieved, in another six countries such universal education is now about to be achieved; in eight other countries with a population of 185 million children in the age-group 6—11 years, universal provision is not available and a very large proportion of children has no schooling facilities. Of ten children in these countries, not more than six have access to schooling.

The provision of school places for children of schoolgoing age does not by itself ensure effective services for children. There are first disparities among different population groups. Most severe of these disparities is in the education of girls. The opportunity gap between girls and boys widens at the second and third levels of education. In many countries of the region, the hard core of the problem of educational services for children lies in the education of girls.

Another area of disparity is in the education of the population living in rural areas. The rural-urban differential in educational opportunities starts right at the primary level and increases at every higher stage of education. Expansion of education systems has not, surprisingly, made any

significant impact on inequalities between different socio-economic population groups in a country. A recent study by Unesco shows that even in developing countries which have achieved high enrolment ratios at the primary level, the differences between one part of the country and another amount to as much as 25 percentage points.

The figures showing the total number of enrolled children disguise the fact that a very significant proportion of these children drop out of school before achieving any educational gains. This is the endemic problem of educational wastage, which includes premature leaving or dropping out of school and repetition, that is, the child having to repeat the same grade (most of those who have to repeat grades also leave school early). In the developing regions, out of ten children enrolled in grade 1, only four reach grade 5 four years later. The rest either drop out or have to repeat the grade. The causes of educational wastage are social, economic, and also educational. Unless direct corrective measures are taken, the percentage of educational wastage tends to maintain itself over long periods of time.

Educational wastage tends also to reinforce educational disparities, to which reference was made earlier. Thus the percentage of educational wastage tends to be higher among girls, and many children in the rural population.

Education systems which operate in a laissez-faire milieu

invariably tend to be socially discriminating. This would be evident from the distribution of enrolled population by socio-economic group, and by the incidence of educational wastage. These are further reinforced by maldistribution of teaching resources such as textbooks, qualified teachers, etc. The discriminatory function of the education system is reflected in the inequalities in educational outcomes among children who are able to stay the full course of schooling. This applies even to countries which may have attained a high enrolment ratio and have eliminated dropping out. Some countries in the region have recently conducted studies of achievement differences in primary education with particular references to the impact of socio-economic disparities on pupil performance and achievement. These studies point out one common conclusion: that differences in school achievement are associated with the socio-economic background of the pupils. This means that to provide educational facilities to children, it is not enough to provide schooling places. The educational programme itself, and its methods, have to be tuned to the needs and potentials of individual pupils. The abstract and academic nature of the school programme creates barriers to the learning and development of a significant proportion of pupils.

The recognition that education is not just schooling, and that schooling does not necessarily provide educational opportunities

for the growth and development of children has prompted a number of countries in the region to launch new and more comprehensive approaches to the provision of educational facilities to all children.

First, there is a trend to develop school programmes (curricula and teaching methods) which are directly related to life and to the environment of the learners. The exclusive emphasis on cognitive approaches to learning is giving place to more active involvement and participation in the learning process centred on the learners' environment.

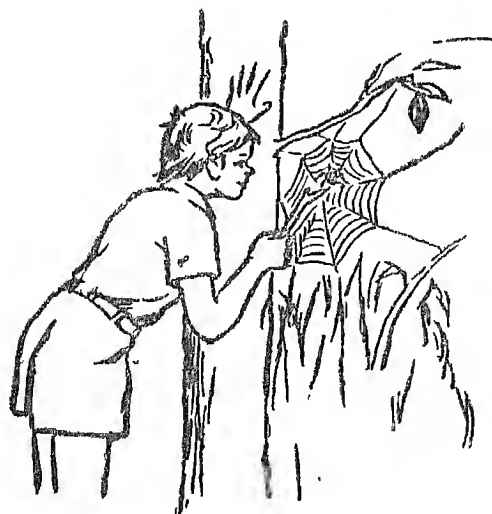
Second, community participation in the educational process is becoming a cornerstone of educational endeavour. Most important of all, it is now being increasingly recognized that there are other paths to learning than formal schooling. The growth and development of what is now popularly known as non-formal education is moving forward at an unprecedented pace in many Asian countries. While a considerable segment of non-formal educational endeavour is directed to the educational needs of young and adult population groups, there are significant programmes which are concerned with the learning needs of children through non-formal modes of education. In these non-formal programmes, community institutions such as places of worship, places of public gathering, as well as community workers and leaders are mobilized to provide educational services to child-

ren who have no access to schooling or whose needs have not been met by formal schools.

In addition to these non-formal ways of learning, many countries of the region are emphasizing the deformatization of the schools by measures such as year-round entry, school time articulated to the local needs such as agricultural operations, flexible points for re-entry into school, part-time learning and part-time

work, and the use of mass media for education.

As national authorities mobilize to meet the learning needs of children, they find that the traditional concept of education will not suffice. New ways and approaches and new sources of learning are being explored. The concept of education is deepening with primary emphasis on the learner child, his environment and his community. □



Helping the Child to Become Human

MARGARET VERMA

Eight authorities on child and Family were commissioned by the Association for Childhood Education International, the National Association of the Education of Young Children and the U.S. National Committee for Early Childhood Education, to address the nation during the International Year of the Child on the immediate needs of children. The message prepared by Dr. Dorothy Cohen, a senior faculty member of Bank Street College of Education, was titled "Helping the child to become human" I have enjoyed the privilege of being a colleague of Dorothy's at Bank St. College and because of my close association with her, professional and personal, I have had much joy in entitling this article too as "Helping the child to become human" To reflect on a few pertinent statements of Mrs. Cohen :

The interaction of our children with people and the natural world is the road to social, emotional, moral and intellectual maturing That road is being bypassed more and more as the criteria for efficient production are applied unthinkingly to the education of children Their need is not for improving efficiency and production rates but for growing into humanness

As we grow more and more accustomed to large spaces and vast distances, we must recognize that children think of the minute, the immediate, the concrete.

We must not overlook the diverse nature that results in the uniqueness of every child, a uniqueness that is nowhere duplicated and that cannot be remoulded.

We must not evade the reality that to be human is to feel as well as to think and that feeling cannot be systematized, packaged or taught It must be experienced within the context of meaningful interaction with people and the environment.

WELL, what then should our concerns be ?.. To make our young children more human ; to let learning occur for children in a humane manner ; to present to children science and math and

social studies in human ways that are free from sexism, racism and other narrow, arbitrary, routine ways in which the humanness of young children is not allowed to grow, but is diminished.



What is considered the most human quality of being a human being? According to some studies, the following seven qualities are supposed to characterize the nature of being human: *thinking, feeling, doing, personality, sense of self, sense of others, and cultural identity.*

I would like to share with you some ideas as to why I feel children should be helped to become human. For instance, we have research studies (Bowlby, Ainsworth, etc.) which state that attachment must occur within the first two years of a child's life or that child will not be able to care deeply for anyone. We also know that attachment has an important effect on a young child's social as well as intellectual development.

Socialization is a term used to label the general process through which children become competent and grow into affective and productive human beings. And who are the agents of socialization? Parents, teachers, doctors, social workers, neighbours, etc. for it is rightly said that it takes a world of people to raise a single child.¹

The National Institute of Mental Health considers approval and acceptance as the basis on which the first steps in personality development are made, emphasizing that gaining approval and acceptance have a tremendous impact on human beings, not only during the early years, but throughout the life span.

Urie Bronfenbrenner, Professor of Human Development and Family Studies at Cornell Univer-

sity advocates a 'national policy' of a 'curriculum for caring'. He feels that knowledge of the human condition has become academic and only by being personally involved will we really understand the true human situation.

Maria Piers of the University of Illinois cites two aspects of adult-child relationships as crucial to the development of socialization and individuality: (i) the loving and disciplining conditions which adults perform when they raise a child, and (ii) an urgent desire in a child to shape oneself and to become like an adult for whom one cares a great deal.

David Elkind of Rochester University in his recent article in *Psychology Today* (February 1979) mentions three basic parent-child contracts for help in the growing of children (implicit agreements about mutual obligations). These are freedom and responsibility, loyalty and commitment and achievement and support.

How can we help young children become human? By accepting them fully—making them know that they are valued for what they are. This is one of the most encouraging things an adult can do for a child.

We can help young children be human by widening their range of experiences—for intellectual development is rooted in exploration—and in order to have experiences that allow or result in exploration, children have to become increasingly independent. One of the most helpful things we

could provide children from infancy on is their degree of independence—to do as much for themselves as they possibly can—for this kind of confidence is synonymous with real freedom.

We can help young children become human by exposing them to nature. For instance, the cells of a honeycomb are brilliant examples of compactness and strength. The shape of a tree, with its spiralling arrangement of leaves is so designed that each leaf has access to sun and rain. We can help children become human by leaving them alone with the wonders and beauty of life in order that they may discover and know them. We can help children gain a full awareness of every experience they encounter because a conscious awareness of the world depends greatly on the quality of one's personal response to it.

We can help young children become human by having faith in each child's individual approach to learn at firsthand from materials and to gain from their intrinsic value. When we help children to acquire a wide variety of ways in which to express themselves, we help them to deepen each moment of their lives with depth of experience and depth of feeling.

We can help young children become human by helping them gain confidence in their significant adults so they can share their deepest experiences. The illness of a pet animal, the death of a grandparent, the soft touch of the fluffy snow or cool breeze—these are experiences which move child-

ren deeply. If they can talk about these and with the help of meaningful adults learn how to express and share their feelings of love, hate, jealousy, anger, fear, joy, pain or sadness, they are able to reach out and begin to understand what is *real* in life. Children also need praise, encouragement, discipline and support. Each of these and all of these together, build a child's sense of self-confidence.

In order to understand children we adults need to listen, observe and minutely watch their reactions. Besides listening to their verbal language, we need to be attentive to their body language—their non-verbal language too. Are they looking or acting sad? happy? tired? enthused? Listening and understanding are very important factors of communication for they help us relate to children's basic physical and emotional needs. Often children are not able to find words to express how they feel. But haven't we adults known times when we couldn't find the words as well?

We who work with children need to develop a special awareness of the cultural influences which affect the behaviour, attitudes and goals of all children. By valuing a child's culture and conveying the importance of cultural identity to young children, we could make them feel proud of their heritage.

As concerned interested adults we must grow along with our children. We must leave ourselves open, receptive to experiences children present us. Do we

really listen to children? How often do we emphasize *questioning* rather than *telling*? Adults working with young children have the responsibility for providing meaningful experiences to them, that will help them to feel as well as to think, for imagination is considered a prerequisite of sensitivity and intellect is fed by experience.

A very basic genetic trait in all human beings is the desire to be curious. Curiosity is an important aspect of creativity... creative people are described as those who are intuitive, perceptive, receptive to new experiences, flexible, spontaneous and curious.

From studies undertaken to discover if curiosity is an inherited drive, it was found that the lack of curiosity in many individuals is apparently not inherited, but learned, for 'stop asking questions' is the 'don't be curious' message children get from many adults.

We can help young children become human by helping them question creatively and to answer without feeling self-conscious, because sometimes, we do not have the answers to children's questions, such as "what is cancer?" but we can still listen and appreciate the questions asked, because curiosity is considered their most basic source of questioning.

It is said that questions are the engines of intellect, that they are the cerebral machines which convert energy to motion and curiosity to controlled enquiry. It

is also said that there can be no thinking without questioning, no purposeful study of the past, nor any serious planning for the future.

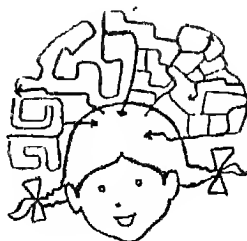
It is only when we work closely with children and are fortunate to realize the depth and value of the experience of knowing them as unique individuals, that we begin to realize that interpersonal relationships come first, that human feelings are the core of all learning.

When we adults have fingers which feel instead of merely touching, eyes which observe instead of merely seeing and ears which listen instead of merely hearing, perhaps, we will have helped our children to become human.

Margaret Mead, who died on November 19, 1978, was an honorary member of the U.S. National Commission for the International Year of the Child.

Her concern for children was deep. Her last public act was to urge President Carter to sign the Child Nutrition Bill. To an International Year of the Child symposium, Margaret Mead sent the following statement just before her death :

In a darkened world beset by the fear of nuclear holocaust, degradation of our soil and an imbalance of population growth that threatens to strangle out human settlements, the Year of the Child stands like a beacon of hope. We must see that its light guides us and gives us direction for preparing a livable, sustainable, beautiful world for our children—those who have been born, those who have been conceived but not yet born, and those children of the future not yet conceived. By keeping our eyes steadily on the pressing needs of children we can determine what needs to be done, and what can be prepared for but accomplished later. For babies cannot wait. □



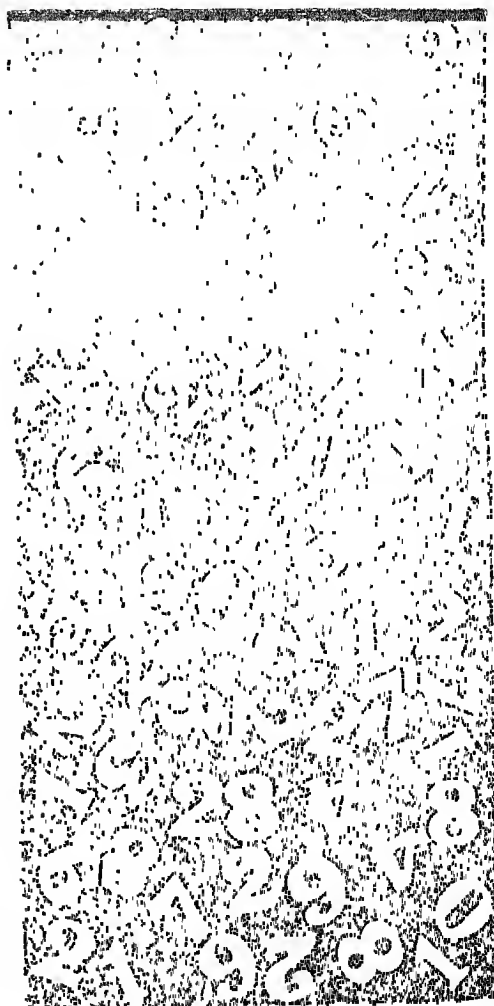
When the Teacher Became a Student

N SUBHRAMANYA 'SANKHYAPRIYA'
*Teacher Educator,
Sharda Teacher's College,
Mysore.*

A TEACHER's job is to teach in the class. There may be occasions for the teacher also to learn in the class. An incident is narrated here when the teacher had to learn from one of his pupils. Once, a teacher of mathematics told his pupils :

Dear children, close all your books. Please do not write anything in your books. Just observe what I write on the black-board. You can raise questions which will be answered by me. What I tell you now is not found in any textbooks. I will show you a wonder in arithmetic. It is very simple but still it creates curiosity. Take a number of two digits. Reverse the number and add it on to the first. The sum is always divisible by 11 without a remainder. For example 23 is a two-digits number. Its reverse is 32. The sum of these two is 55 which is divisible by 11 without a remainder. Another example is 38 and its reverse is 83. The sum is 121 which is also divisible by 11 without a remainder as usual.

This narration created enough curiosity among the pupils who took up the verification of the statement made by the teacher. Every pupil coined his own problem, did as explained by the teacher. They were surprised to find that in all the cases the number obtained was always divisible by 11 without a remainder. The pupils did plenty of problems. Not even a single student was able to disprove the theorem.



Meanwhile the teacher gave another peculiar example of a two-digits number 50. The reverse is 05. (There is the possibility of committing a mistake while reversing 50.) Now the sum is 55 which is once again divisible by 11 without a remainder. When the whole class was very busy with this active programme, one of the students who was seated in the last bench drew the attention of the teacher. Usually, he was a very lazy fellow in the class. He was also sufficiently motivated to solve this arithmetical problem.

"Sir, I too want to solve the problem", the student said.

"Very good, do it", the teacher said.

"I have not brought paper and pen. So, I would like to solve the problem on the black-board", the student pleaded.

The student was permitted to do so. He came near the black-board and wrote 81 as a two-digit number. The reverse of the number is 18. For the purpose of adding he had to write 18 just below 81. Instead, he wrote 18 by the side of 81 which became 8118. The teacher asked him to write 18 below 81 but not by its side. "What happens if 18 is written by the side of 81?", the student questioned. The teacher lost his patience at this impertinent question and feeling that the student was not following his instructions, he gave a blow at the back of the student and insisted on writing 18 below 81. But the student refused to follow the teacher's suggestion

and shouted back saying that 8118 is also divisible by 11 without a remainder. Now the teacher had to verify the truth of the statement made by the student. He did it promptly and to his surprise, he found that the number 8118 was divisible without a remainder. The teacher did some more problems and he was convinced that what the student had said was quite correct. Virtually, the teacher became the student obeying the instructions of his student. Then the teacher asked whether he knew this information before.

The student said : "While you were explaining that the reversal of the number must be written below, for the purpose of adding, out of curiosity I placed the reversal by the side of the original number and made an attempt if that number was divisible by 11. To my surprise, the number was divisible by 11 without a remainder. Incidentally, I discovered it. I waited for sometime patiently, and expected that you would give this additional information. But you never gave it. So, I thought that you were ignorant about it. Hence, I had to take the trouble of teaching you this".

The teacher felt ashamed at his rude behaviour towards his pupil and he always remembered this incident throughout his life. Since then he used to narrate this simple theorem in arithmetic as follows :

Take any number of two digits
Reverse the number. If you
write it (a) below the 1st

number for adding, or (b) above the 1st number for adding, or (c) by the right side of the number or (d) by the left side of the number, under all these circumstances, the new number obtained is always divisible by 11 without a remainder.

Illustration

23 is a two-digit number, and its reverse is 32.

(a) 32 is written below 23

$$\begin{array}{l} 23 \\ 32 \end{array} \left\{ \begin{array}{l} \text{when added 55 is} \\ \text{obtained which is} \\ \text{divisible by 11 with-} \\ \text{out a remainder.} \end{array} \right.$$

(b) 32 is written above 23

$$\begin{array}{l} 32 \\ 23 \end{array} \left\{ \begin{array}{l} \text{when added 55 is} \\ \text{obtained which is} \\ \text{divisible by 11 with-} \\ \text{out a remainder.} \end{array} \right.$$

(c) 32 is written by right side of 23

2332 is obtained. This is also divisible by 11 and the quotient is 212.

(d) 32 is written by the left side of 23

3223 is obtained. This is also divisible by 11 and the quotient is 293. \square



Do Your Duty

M. K. GANDHI

EXCERPTS FROM 'TRUE EDUCATION'

IT HAS BEEN a matter of the greatest joy to me and consolation, in the face of many difficulties, to find that the student world throughout India has a warm corner for me in their heart. The students have lightened my burden to a very great extent. But I cannot suppress from me the feeling that in spite of this personal affection that the students have shown to me everywhere and even identification with the poorest of the land, the students have yet to cover a vast amount of ground. For you are the hope of the future. You will be called upon, when you are discharged from your colleges and schools, to enter upon public life to lead the poor people of this country. I would, therefore, like you students, to have a sense of your responsibility and show it in a much more tangible manner. It is a remarkable fact and a regrettable fact that in the case of the vast majority of students, whilst they entertain noble impulses during their student days, these disappear when they finish their studies. The vast majority of them look out for loaves and fishes. Surely, there is something wrong

in this. There is one reason which is obvious. Every educationist, every one who has had anything to do with the students, has realized that our educational system is faulty. It does not correspond to the requirements of the country, certainly not to the requirements of poor India. There is no correspondence between the education that is given the village life and the village life. But that is, I fear, a larger question than you and I can deal with in a meeting of this character.

The One Indispensable Condition

Taking things as they are, we have to consider what is possible for the students to do and what more we can do in order to serve the country. The answer that has come to me and to many who are eager to see that the student world gives a good account of itself, is that the students have to search within and look after their personal character. Purity of personal life is the one indispensable condition for building a sound education. And my meetings with thousands of students and the correspondence which I continuously have with students in which they pour out their innermost feelings and take me into their confidence show me quite clearly that there is much left to be desired. I am sure that all of you understand thoroughly what I mean. In our language there is a beautiful word, equivalent for the world students, that is, *brahmachari*, *Vidvarathi* is a coined word and a poor equivalent for *brahmachari*.

And I hope you know what the word *brahmachari* means. It means searcher after God, one who conducts himself so as to bring himself nearest to God in the least possible time. And all the great religions of the world, however much they may differ, are absolutely one on this fundamental thing that no man or woman with an impure heart can possibly appear before the Great White Throne. All our learning or recitation of the Vedas, correct knowledge of Sanskrit, Latin, Greek and what not will avail us nothing if they do not enable us to cultivate absolute purity of heart. The end of all knowledge must be building up of character.

Do Not Lose Faith

An English friend in Shimoga, whom I did not know before, came up to me and asked me, Why it was, if India was really a spiritually advanced country, he did not observe in the students a real yearning after knowledge of God, why was it that the students, many of them, did not even know what the Bhagavadgita was. I have what appeared to me an honest explanation and excuse for this discovery of his. But I do not propose to give that explanation to you nor seek to excuse this very great and grave defect. The very first and earnest request that I would make to the students before me here is that each one of you should search within, and wherever you find that my remarks are justified, you will begin to reform and rebuild yourself, and those of

you who are Hindus, and the vast majority are Hindus I know, will endeavour to understand the very simple, beautiful, and to me soulful message of Gita. The experience, and I think I can say the experience without a single exception of those who have really carried on this search after truth to render their hearts pure, is that it is an utterly impossible effort, unless it is accompanied by a heart prayer to the Almighty. Whatever, therefore, you do, do not lose faith in God. I cannot reason out the thing for you, because really speaking it is a fact which transcends reason. But I want you to cultivate a spirit of real humility and not summarily reject the experiences of so many teachers, *rishis* and others of the world and not regard them as so many superstitious men. And if you will but do this, all the rest that I want to say will be as clear as crystal to you. This will be to me the test of your sincerity of profession. If you have real faith in God, you cannot but feel for the humblest of His creation. And whether it is the spinning wheel and Khadi, or untouchability, or total prohibition, or social reform in connection with child-widows and child-wives and many other similar things, you will find that all these activities are derived from the same source.....

In this one institution alone, I understand, you are more than 1,400. Just think what the 1,400 by giving only half an hour to spinning can add materially to the wealth of the country. Think also

what 1,400 can do on behalf of the so called untouchables, and if all the 1,400 young men were to make a solemn resolve, and they can do so, that they are not going to have anything whatsoever to do with child-wives, imagine what a great reform you will make in society around you. If the 1,400 amongst you, or a respectable number even devote your leisure hours or part of your Sundays to going amidst those who are given to drink and in the kindest manner possible steal into their hearts, imagine what service you will render to them and to the country. All these things you can do in spite of the existing faulty education. Nor do you require much effort for doing these things except that you have got to change your heart, and to use a current expression in the political world, alter the 'angle of vision'.

(Address to the students of Vellore)

II

I thank you sincerely for all the gifts you have given me for Daridranarayan....

Let not therefore, this purse be the first and last demonstration of your affection for the spinning wheel. I tell you it would be an embarrassment for me if it is the last demonstration of your affection; for I shall have no use for the money if the Khadi that may be produced through the distribution of that money amongst the starving millions is not used by you. After all a lip profession of faith in the *Charkha* and the

throwing of a few rupees at me in a patronizing manner won't bring Swaraj and won't solve the problem of the ever-deepening poverty of the toiling and starving millions. I want to correct myself. I have said toiling millions. I wish that it was a true description. Unfortunately, as we have not revised our tastes about clothing, we have made it impossible for these starving millions to toil through out the year. We have imposed upon them a vacation which they do not need, for at least four months in the year. This is not a figment of my imagination, but it is truth repeated by many English administrators, if you reject the testimony of your own countrymen who have moved in the midst of these masses, So then if I take this purse away and distribute it amongst the starving sisters, it does not solve the question. On the contrary it will impoverish their soul. They will become beggars and get into the habit of living upon charity. Heaven help the man, the woman or the nation that learns to live on charity. What you and I want to do is to provide work for those sisters of ours living protected in their own homes, and this is the only work that you can provide them with. It is dignified and honest work, and it is good enough work. One *anna* may mean nothing to you. You will throw it away in getting to a tram car and lazily passing your time instead of taking exercise for 2,3,4 or 5 miles as the case may be. But when it finds its way into the pockets of one poor sister it fruitifies. She

labours for it and she gives me beautiful yarn spun by her sacred hands, a yarn that has a history behind it. It is a thread worth weaving a garment out of for princes and potentates. A piece of calico from a mill has no such history behind it. I must not detain you over this one theme, great as it is for me, and though it engrosses practically the whole of my time. This purse of yours will not be a help but a hindrance to me if it is not an earnest of your determination henceforth, if you have not it already that you are not going to wear anything else but khadi.

Let me not be deluded into the belief that you believe in this gospel of Khadi, because you give me the purse and because you applaud me. I want you to act up to your profession. I do not want it to be said of you—the salt of India—that you gave this money merely to bamboozle me, that you do not want to wear Khadi and that you have no belief in it. Do not fulfil the prophecy that had been made by a distinguished son of Tamil Nadu and a friend of mine. He has said that when I die I will not need any other firewood to reduce my corpse to ashes but the wood that will be collected out of the spinning wheels that I am now distributing. He has no faith in the *Charkha* and he thinks that those who utter the name of the *Charkha* do so merely out of respect for me. It is an honest opinion. It will be a great national tragedy if the Khadi movement turns out to be that and you will

have been direct contributors to the tragedy and participators in that crime. It will be a national suicide. If you have no living faith in the *Charkha* reject it. It would be a truer demonstration of your love, you will open my eyes and I shall go about my way crying hoarse in the wilderness: “You have rejected the *Charkha* and thereby you have rejected *Daridranarayan*”. But save me and save yourselves the pain, the degradation and the humiliation that awaits us if there is any delusion or camouflage about this. This is one thing. But there are many things more in your address.

Brahmanism or Animalism

You have mentioned there child-marriage and child-widows. A learned Tamilian has written to me to address students on child-widows. He has said that the hardships of child-widows in this presidency are far greater than those of child-widows in other parts of India. I have not been able to test the truth of this statement. You should know that better than I do. But what I would like you, young men around me, to do is that you should have a touch of chivalry about you. If you have that, I have a great suggestion to offer. I hope the majority of you are unmarried, and a fair number of you are also *brahmacharis*, I have to say ‘a fair number’ because I know students; a student who casts his lustful eyes upon his sister is not a *brahmachari*. I want you to

make this sacred resolve that you are not to marry a girl who is not a widow. You will seek out a widow girl and if you cannot get a widow girl you are not going to marry, at all. Make that determination, announce it to the world, announce it to your parents if you have them or to your sisters. I call them widow-girls by way of correction because I believe that a child ten or fifteen years old, who was no consenting party to the so-called marriage, who having married, having never lived with the so-called husband, is suddenly declared to be a widow, is not a widow. It is an abuse of the term, abuse of language and a sacrilege. The word "widow" in Hinduism has a sacred odour about it. I am a worshipper of a true widow like the late Mrs. Ramabai Ranade who knew what it was to be a widow. But a child 9 years old knows nothing of what a husband should be. If it is not true that there are such child-widows in the presidency, then my case falls to the ground. But if there are such child-widows, it becomes your sacred duty to make the determination to marry a girl-widow if you want to believe that all such sins that a nation commits react upon it physically. I believe that all these sins of ours have accumulated together to reduce us to a state of slavery. You may get the finest constitution that is conceivable dropping upon you from the House of Commons. It will be worthless if there are not men and women fit enough to work that constitution. Do you suppose that we can possibly call ourselves men

worthy of ruling ourselves or others or shaping the destiny of a nation containing 30 crores so long as there is one single widow who wishes to fulfil her fundamental wants but is violently prevented from doing so? It is not religion, but irreligion. I say that, saturated as I am with the spirit of Hinduism. Do not make the mistake that it is the Western spirit in me that is speaking. I claim to be full to overflowing with the spirit of India undefined. I have assimilated many things from the West but not this. There is no warrant for this kind of widowhood in Hinduism.

All I have said about child-widows necessarily applies to child-wives. You must be able surely to control your lust to this extent, that you are not going to marry a girl that is under 16 years of age. If I could do so I would lay down 20 as the minimum. Twenty years is early enough even in India. It is we who are responsible for the precocity of girls, not even the Indian climate, because I know girls of the age of 20 who are pure and undefiled and able to stand the storm that may rage round. Let us not hug that precocity to ourselves. Some *Brahmana* students tell me that they cannot follow this principle, that they cannot get *Brahmana* girls sixteen years old, very few *Brahmanas* keep their daughters unmarried till that age, the *Brahmana* girls are married mostly before 10, 12 and 13 years. Then I say to the *Brahmana* youth, 'cease to be a *Brahmana*', if you cannot possibly control yourself. Choose a grown

up girl of 16 who became a widow when she was a child. If you can not get a *Brahmana* widow who has reached that age, then go and take any girl you like. And I tell you that the God of the Hindus will pardon that boy who has preferred to marry out of his caste rather than ravish a girl of twelve. When your heart is not pure and you cannot master your passions, you cease to be an educated man ..And what is education without character and what is character without elementary personal purity ?

Evil of Smoking

In response to the request of a Calicut professor I shall now proceed to say something about cigarette smoking and coffee and tea drinking. These are not necessities of life. There are some who manage to take ten cups of coffee a day. Is it necessary for their healthy development and for keeping them awake for the performance of their duties ? If it is necessary to take coffee or tea to keep them awake, let them not drink coffee or tea but go to sleep. We must not become slaves to

these things. But the majority of the people who drink coffee or tea are slaves to them. Cigars and cigarettes, whether foreign or indigenous, must be avoided. Cigarette smoking is like an opiate and the cigars that you smoke have a touch of opium about them. They get to your nerves and you cannot leave them afterwards. How can a single student foul his mouth by converting it into a chimney ? If you give up these habits of smoking cigars and cigarettes and drinking coffee and tea you will find out for yourselves how much you are able to save. A drunkard in Tolstoy's story is hesitating to execute his design of murder so long as he has not smoked his cigar. But he puffs it, and then gets up smiling and saying, "What a coward am I", takes the dagger and does the deed. Tolstoy spoke from experience. He has written nothing without having had personal experience of it. And he is much more against cigars and cigarettes than against drink . But do not make the mistake that between drink and tobacco drink is a lesser evil. No. If cigarette is Beelzebub, then drink is Satan

(Speech at Pachiappa's College)



Teaching of Languages at Primary Levels

VEER NARAYAN SHARMA

Advocate

Sironj (MP)

DESPITE advanced teaching-technologies, methods, well-qualified and trained teachers of languages, constant fall of proficiency in languages is being generally observed throughout India. Graduates and even post-graduates are found badly lacking in the language in which they possess the Bachelor's or the Master's degrees. This is a matter of great worry for two reasons—one that we shall not be able to produce great scholars and the second that students and scholars of arts and science, who have gained extraordinary knowledge of their subjects and have discovered valuable things, will not be able to put their achievements before the people of the world without a mastered language.

Language is also a science. It has its own settled principles of grammar. These rules of grammar should be brought well home to our children at primary stages because knowledge of grammar is fundamental for gaining proficiency in a language. Language and grammar are inseparably connected. With adequate knowledge of grammar the students must also be taught proper usage of

words and should be perfect in pronunciation. Only then can we expect from them the right use of such words which sound quite alike but have altogether a different meaning, like 'soot' and 'suit', 'skein' and 'skin', 'soon' and 'woon', and 'swoop' and 'swop'.

Language is best learned at tender age and can, therefore, be taught well from primary levels to higher secondary standards. After that, it is difficult to teach language. That is why today many graduates wanting to learn another language are searching for English and other language teachers and failing in their attempts, they are resorting to Rapidex English learning and speaking courses etc., with no results. The guaranteed Rapidexes also suffer from so many grammatical mistakes; they are less reliable and do not provide the learners with the basic principles of language learning.

Where Lies the Defect

It can be plainly said that the defect lies in the defective courses prescribed at primary levels. For example, English teaching begins from class six in the state of Madhya Pradesh. The English Reader Book I for class VI, edition 1974 which is still being taught in Madhya Pradesh does not contain the alphabet for the little learners to acquaint themselves with the letters of the alphabet. The learners cannot know the alphabet unless the letters are presented before them in a very lucid manner. This fact cannot



Photo : Courtesy C.E.T

be denied that the whole edifice of English language is based only on alphabet. English alphabet for writing and printing are altogether different in shape. Unless the whole set for writing and printing is brought home to the beginners, they cannot pick them up of their own accord. Although, the matter was referred to the authorities in the Text Book Corporation of Madhya Pradesh and CIEFL, Hyderabad, this discrepancy has not yet been rectified, with the result that the students are not able to read and write English correctly even at higher stages in the State.

The next thing is that teaching of grammar has been ignored. Even graduate and post-graduate teachers of today, are not able to teach grammar, the root of the language. Curriculum also lacks with regard to language teaching. Professors F. J. Rowe and

W.T. Webb in their book 'Hints on the study of English' have beautifully given in detail all the basic principles of language learning. Selections can be suitably made from this book for primary, middle, and higher secondary standards to enable the students of English Language to learn it properly. The catastrophe can thus be put an end to

It is best to concentrate on alphabet for reading, writing, printing and typing. Emphasis should be laid on calligraphy, orthography, orthophony, syllabification, cursive-writing, use of capital and small letters and parts of speech in the primary classes so that they are thorough in recognizing and correct in writing. This will help the learners a lot in their higher classes when they are expected to write answers to the given questions in their own language

For the rules of grammar, the language teachers should be very strict. For mistakes of grammar, no lenient view should be taken. Marks should be deducted for grammatical mistakes just like it is done for arithmetical wrong answers. This process will keep the learners alert and they shall be particular in picking up their lessons right from the beginning.

Language teachers have been heard saying to their students, "Hindi is your mother tongue and English is a foreign one, so you need not worry about it. You will get pass marks somehow or the other". This apathy of teachers has very much helped in the fall of the standard of English language. This attitude should be curbed.

In the year 1956, a head examiner of English answer books of Intermediate Examination issued instructions to examiners under him that marks should not be deducted for easily understandable English. By easily understandable English, he meant that the examinee who wrote, 'I am go' for 'I go' and 'He go' for 'He goes' was right in his attempt. He was of the opinion that the above sentences were the nearest and the best possible approach to what was desired. This liberal view went to the extent that if a student wrote 'a cat' for 'a dog', he was treated to be on the right path by giving the justification that he meant by it a four footed animal. This type of considerations have brought the standard of languages very low and it is very much due to such instructions and misconceptions that today we find grave

mistakes of spellings and grammar in text books and authentic magazines. This treatment to languages is not at all tolerable. This will spoil the basic structure of the languages and the beautiful mansions of learning will topple down some day.

In olden days, language teachers were very strict. They did not tolerate even mistakes of punctuation and spellings in English. Hindi, Sanskrit and Urdu teachers deducted marks for *bindu*, *chandra*—*bindu*, *visarga*, *halant*, *anuswar*, *zer*, *zabar* and *pesh* marks. It were the old grammarians of all languages who brought the languages to the highest standards. We have not to produce polyglots and pedants but we have still to produce men of erudition and scholars like Rabindranath Tagore, Rahul Sankrityayana and Saivapalli Radhakrishnan. Whims and tantrums should have no place in language teaching. Languages should be taught in the very spirit they have been originally contemplated and in accordance with the rules of their respective grammars.

Good expression is the *prima facie* test of one's knowledge of one's subject and can only be gained by good knowledge of language. Wrong spelling and wrong pronunciation present a very poor impression even about so called great and learned scholars. So a very systematic and proper teaching of languages is desired throughout the country to help students gain proficiency of expression and perfect command over a language. □

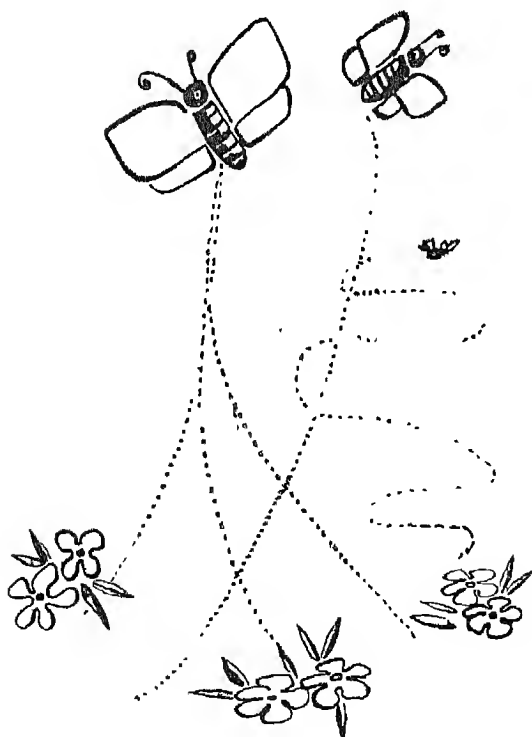
TEACHERS WRITE

Agricultural Research and Primary Teacher

In our country there are many prestigious agricultural research organizations and agriculture universities, carrying out a number of research projects. Their findings have an important bearing on the prevailing agricultural practices. But, actually how much of this research wealth does reach our farmers! How much benefit do they take from it! Probably not very much, as compared to the amount of funds that are allocated for this very research. Then, should not we make the maximum use of the available research results and take them at the doorstep of each and every farmer, whether small or big.

According to Richard Chirishfield our land is specially suited to multiple farming. We also have good amount of agricultural resources like sunlight and water. For 350 million acres of cultivable land we use the same amount of chemical fertilizers as Egypt uses for its sixty lakhs cultivable land. A country like Holland produces maize nine times of what we produce.

Leave alone the optimum use of fertilizers here on the contrary sixty lakh tonnes of valuable cowdung is burnt as fuel, which will otherwise make so much quality manure. The reason for such colossal waste probably is again ignorance and lack of understanding. Seventy per cent of our farmers are not aware of the new agricultural techniques. So how do we except them to benefit from



these ? First and foremost efforts should be made to take the relevant message of improved practices of agriculture to each and every farmer.

There are many educated farmers who are keen to know about the latest developments in agriculture. The primary teacher can collect information about the agricultural magazines brought out by different agricultural universities and show them a few sample copies. They can also subscribe from their school funds or collect money themselves for the agricultural magazine brought out by their regional agricultural university. The teacher can show the magazine to his pupils in the class and discuss whatever useful information it gives. He may give it to the students for reading and also lend it to them so that they can show it to their parents and read it to them if need be. The primary teacher can then follow it up by a personal visit to the farmers and discuss about the usefulness of the magazine, its availability, how and where they can read it regularly and any other related question. Like this many farmers will know what new methods of cultivation are being developed. Some progressive farmers may then start reading the magazine regularly and keep abreast with what's new in agriculture and try to practise it. Like this the primary teacher can help indirectly in increasing agricultural production.

Once the farmers know the utility of such magazines they will agree to become regular subscri-

bers to such magazines. I have tried it out myself quite successfully and have made many new subscribers for *Changi Kheti*, brought out by the Punjab Agricultural University, Ludhiana. I hope that the other primary teachers too can try it out and thus help indirectly in increasing agricultural production.

SATYAPAL BIHARAT BHUSHAN
Govt. Primary School, Mulahi
P O Baghania, Sangrur (Pb)



Inter-Relations Between a Teacher and a child

A child's mind is tender and impressionable at the primary stage. What he observes at this time and the environment he is put into at this stage leaves permanent impressions on him. No doubt he comes to the school to learn. But learning doesn't mean just covering the essential curriculum. It has a wider comprehension. The prevailing atmosphere and the teacher's personality are equally important for proper teaching and learning. A teacher's job can just not be limited to teaching a particular subject but he should be able to establish a good relationship with his pupils.

At the primary stage particularly the teacher is a very important person for the child. He has fascination for the teacher and whatever he sees in him he tries to emulate, if not by action, at

least by thought. So the teacher should also try to come close to the child, try to understand him, his underlying potentialities and give him due affection and all the needed protection that he looks for in his teacher.

First and foremost a good teacher must be polite to his pupils. A sense of goodwill is a must and for him all his pupils should be equal. Partiality or uncalled for attention to any single child or a group of a few leads to strained relations with other children. On the other hand if he gives individual attention to each child and develops a rapport with them, he will have no difficulty in delivering the message. At the primary stage a teacher's close contact with his students and thus non-formal teaching is more effective than the radio or television programmes or formal teaching. A child is really lucky who gets training from such teachers who are friendly and affectionate, who have mature thinking toward life's day to day problems, who can keep emotionally balanced under any stress or strain and who are academically highly qualified.

Developing good relations

To develop good relations with his pupils a teacher must have a few basic qualities, such as :

Full faith in the child's personality.

Emotional stability.

Good personal relations with the students.

Ability to cooperate.

Competency to deliver the message.

Power to conduct

Faith in maintenance of discipline.

Ability to maintain a casual atmosphere in the class.

Faith in the child's personality

A good teacher must try to make each child feel important and have faith in himself. He should encourage each child in his efforts so that he is successful. Success builds self confidence which in turn helps in full development of the child's inherent potentials.

Emotional Stability

A teacher must always be concerned about the welfare of his each and every pupil. His approach should always be balanced and impartial. Children feel protected under the guidance of an emotionally stable teacher and are able to follow them properly.

Good personal relations with the students

A good teacher must also treat all his students equally and never try to favour any one. He should always have friendly relations with his students. He can then communicate instantaneously with them and they too will seek his advice without any inhibitions.

Ability to seek cooperation

In many a project in the school the class must work as a team under the guidance of the teacher. And how successfully they accomplish the task depends upon how well the teacher has organized the team. Has he been able to

seek maximum cooperation from each student?

Even in the selection of a project the teacher can involve his pupils and then help them in planning and executing it on their own. With the encouragement of the teacher the pupils will develop the ability to organize, to decide and to execute, and thus accomplish their aims.

Competency to deliver the message

A good teacher always makes his students grasp what he teaches. Each and every point that he elaborates makes a clear picture in the minds of his pupils. When the message is delivered with such competency the students can never forget what he has taught them.

Power to conduct

A powerful and attractive personality of a teacher by itself draws the students' attention and when the class is attentive naturally, he is able to conduct the lesson well. When he himself is full of ambition and unlimited zest he can infuse the same qualities in his students.

Faith in discipline

Proper discipline is first and foremost for good teaching. In fact the children who learn the value of discipline right from the beginning from their teachers, know how to conduct themselves in the society and be good citizens. The society these days gives full freedom to its children but expects them to understand their duties and learn human values like sympathizing and cooperating with

the fellow human beings.

Casual Atmosphere

Casual atmosphere in the class at times gives full freedom to the students. In such an environment they feel free and learn to take things easily which is a must at times. But surely it doesn't mean laughing at each other's expense. Humour enlivens the whole atmosphere of the class. It has simplicity and innocence and most of all, power to refresh. Children brought up in such an atmosphere are an asset to the society.

HARISHANKAR SHARMA
Govt. Hr. Sec. School
Khimi, Swaimadhopur
(Rajasthan)



Primary Teacher's Real Task

Children are born with equal rights. They are the wealth of a nation and are the future-makers of its destiny. Primary school is a place where children come, play and express their feelings and attitudes. If this place is not made interesting, education cannot be imparted through playway activities and allround development of the child cannot be possible. It is the responsibility of the teacher to teach every lesson through activities because children like to play. Thus, if the teacher is intelligent he can impart more knowledge to children through games. For example, if he wishes to teach counting, he may allot numbers

to students and call them by their roll numbers rather than their names. They may be asked to stand in queue according to their number and run up to a tree or a point and the winning numbers are encouraged with petty awards like toffees and chocolates. Every child may be made referee by turn. Counting upto twenty may be taught on the first day, forty on the second, and in this way counting upto one hundred could be covered within five days. The game may be repeated till all the children have learnt counting. This can also be taught through pictures. For instance, a multi-coloured circle could be drawn on the black-board and the students may be asked to run to the black-board by turn and point out the colours. This would give them physical exercise as well.

Similarly, geography lessons can be taught through games. For example, the lesson on eclipses may be taught by students selecting the tallest student in the class as sun, the shortest as moon and of middle height as earth. They may be asked to stand in order of their heights. The earth may be asked to rotate around the sun and at the same time the moon around the earth. When the moon comes in between the sun and the earth, they may be asked to stop for a while and the teacher may explain the phenomenon of solar eclipse to the class. Similarly, when the earth comes in between the sun and the moon, the process of lunar eclipse could be explained. In this way, the children may also be taught that the

sun is the biggest and the moon the smallest among these three planets.

Teaching in this way automatically helps physical as well as mental growth of children.

Some of the factors responsible for lack of attitudes among teachers for teaching through activity approach are :

1. Poor teacher-pupil ratio
2. Non-Cooperation of parents
3. Lack of confidence among children
4. Promotion of weak students to the next class
5. Posting in a nearby village school
6. Poor pay scales
7. Lack of nationalised education
8. Poor conditions of schools.

If steps are taken to remove these defects in our education system, the future generation of teachers can contribute to the cause of a progressive nation.

GHANSHYAM SHARAN SRIVASTAV
*Shri Krishna H S. School, Pirauna
 Distt. Jalaun (U.P.)*



Creative Education in Primary Schools.

Art is life and life is art. In other words, art and life are complementary to each. In the same way, art and creativity are com-

plementary values. It is rather difficult to develop artistic and constructive attitudes with these original values. Creativity is the very power which differentiates the brilliant from the common rung of people in different areas. Since creativity is an essential quality of a child, it ought naturally to be an integral part of his education. A child without this quality becomes a hopeless student. He cannot become a good scientist, philosopher, politician, economist, educationist, planner, leader, teacher, artist, musician, sculptor or even a farmer.

Creativity is that special quality of an individual which influences theoretical as well as practical aspects of his life. A child possesses creative abilities instinctively like his natural instincts. However, it does differ quantitatively. That is why the world is only profited by the creativity of just a few who are really genius. The seeds of creativity are present in every child from birth. But its development is dependent upon the success of an Education System. Likewise every child is naturally gifted with art and it becomes the duty of educational institutions, parents and teachers to bring out and develop this capability to help children progress in their life.

A self-studying individual alone can think constructively. But this is possible only when he is provided with a free environment for learning. Creativity could be developed in children through :

1. Developing constructive

outlook.

2. Encouraging Constructive thinking.
3. Helping individuals to make their activities constructive.
4. Developing self-confidence and ability to adjust with the changing environments.
5. Developing learning attitudes among children right from their childhood.
6. Detailed programmed learning on content matter.
7. Imaginative exercises on comparative study, construction and modification and writing ability.
8. Presenting reading material through other media.
9. Developing abilities to reconstruct reading material.

A creative individual possesses sufficient amount of originality, awareness of problems, curiosity, ideas, imagination and other similar characteristics. A creative teacher has always an earnest ambition to develop fully the creative abilities of children and tries to serve as a model of physical and mental health for the children.

Learning of art yields us ability to understand and appreciate our national responsibility. It lends us unique concentration besides proper utilisation of our time and warns us always to perform our duty properly. Thus art and creativity significantly contribute to the reconstruction of the country.

Libraries and books provide great store of knowledge and thoughts. Library is in fact the very heart of school. It is essential to enrich schools with libraries instructional material to meet the intellectual needs of imaginative children.

It is desirable to devise planned and effective experiences to encourage students in their aspirations and to develop in them the habit of organizing and reorganizing learning units. The author collected writings of some 35 class V students on a particular subject. Some of these were found to be sufficiently original. Children develop imagination with age. Believing that it is useful to give more free time for creative expression to students in their early age, the author tried to implement the following planned programme for developing their impressions and attitudes.

- Arranged subscription to children literature like Nandan, Paraag, Chandamama, Balbharti etc.
- Provided for library and for free time to enable children to read newspapers and other useful children literature and to develop in them the habit of self-study.
- Students were encouraged to prepare a diary of their collections.
- Children possess a strong urge to copy elders. They feel encouraged to read a paper written by their teachers and also try to write themselves. Writing by

teachers leaves a deep impression upon students. On reading the author's writings in the magazines students try to write and present for further guidance. The writings submitted by students were modified and contributed to monthly newsletters under the students' names. On seeing their papers in print, they felt encouraged and elated, in this way new ideas and imagination were developed in them.

- If the child is encouraged to work in accordance with his aptitude and interest he would do it whole heartedly and in a better way without being tired. Girls are mostly inclined towards music, drawing pictures, etc. while boys towards poetry, story writing, tit-bits, hand writing, art etc.
- Good work done by students ought to be appreciated in the class, in the prayer, among parents and friends. They should also be properly guided at different points of time to help them in their self-study, creative writings and other day to day affairs.
- Sufficient opportunities were made available to students to help them present their creative works at prayers and *Balsabhas*, rural cultural programmes and fairs, etc. This was done to help them do away

with their complexes like cowardice, fear, etc.

- Students were told about science quiz programmes and they wished to participate in them. They were successfully awarded in these tests after two or three attempts. Parents and friends were impressed by them, they began to respect teachers and to appreciate their wards' literary and creative work.
- House competitions were organized every month and winners were awarded accordingly. Similarly, annual fairs were arranged and ideal students were awarded prizes and testimonials.

The progress made so far in civilization and culture has been possible as a result of untiring efforts made by a few creative persons only. It is due to the educational, social, economic, political and psychological problems that they faced.

Creative education is also faced with many an obstruction at home, for instance a child blessed with originality and creativity is generally not encouraged by parents.

On the contrary, he is snubbed whenever he sits to pen down his ideas and is asked to do some other work. Whenever a child wishes to learn, he does not find one who can help him, nor does he possess requisite material. Problems arise whenever we try to teach not keeping in mind the psychological point of view. There are a number of problems that arise in school and a successful teacher does find a solution to all these.

There is certainly no doubt that a work done in a planned way in the light of objectives does succeed. A teacher is really like a potter and a primary school boy like clay. Therefore, the teacher can mould the child's personality the way he likes. The need of the hour is that every piece of work whether big or small should be taken seriously and treated as a duty. It is this attitude that needs to be inculcated in our primary school students from the very beginning of their schooling.

BIJANWAR LAL NAGDA

Headmaster

Primary School, Nandeshtama

Udaipur (Rajasthan)

APEID'S INNOVATIVE PROJECTS

THE sixth Regional Consultation Meeting of Asian Programme of Educational Innovation for Development (APEID) held at Bangalore on April 30, recommended four joint innovative projects in education to be taken up by Asian and Oceania countries.

These projects include integrating subject areas in Primary education curriculum, in-service primary teacher education, meeting the educational needs of youngsters who have had no formal education, and incorporating moral values in the educational programmes.

The meeting strongly emphasized informal approach and wished adequate funds for a variety of informal educational programmes to help meet the needs of various sections of the population.

It also felt the necessity for effective coordination of work among various educational agencies at the grass root level.

New Approach to Primary Education

Indian children are more at home in hard work and the British in expression. Such is the observation of British experts like Peter Laver, Education Advisory

officer at Hampshire (U.K.) and Mrs. Gillian Knight, Advisor for Primary Education in the British Council in London, who visited India recently. As to them the aim of primary education is to equip children with basic skills, to encourage them to use these skills

in a variety of situations, to make them aware of the world around and give them experience and realisation that learning is an exciting fun. If it produces boredom and pressure, the children's desire to move forward and develop an inquisitive mind gets

PLAY WITH A PURPOSES'

Painting and drawing encourage their ability to express themselves Children at a Primary School busy with the easels



Photo - Courtesy Information Deptt, British High Commission



Photo . Courtesy Information Deptt British High Commission

restrained. Accordingly, the imposition of a tight curriculum structure by a higher authority can only lead to serious constraints within a school. The primary teacher must be trained to think and be able to take professional decisions.

He should be trained not only to assess the performance of children but also to think on creative lines. He should be free to make decisions about curriculum. Besides, the number of children in a class should be manageable. In Britain there is one primary teacher for 26 children as against one for 60 in India. There the system aims at encouraging children to undertake responsibility in their sphere of work and to look after them-

selves. The informal system of education has given way to a child oriented approach. Each child gets an opportunity to work with his hands and explain to his teacher what he does. The giving of first-hand experience of work is very essential for children to develop their creative faculty.

The informal approach to teaching makes learning a game which is both enjoyable and hard work. For instance children may be given charts to learn tables as if they are playing.

Integration of weak children with the main group is also extremely desirable. It has been found that normal children tend to be more supportive and useful to those who need care.

Stressful occurrences are inevitable in the experience of every growing, learning child. Most often, these expectable upsetting events are not traumatic or catastrophic, but are rather predictable developmental happenings.

Stress may be manifested in the child's "inner world" as new ideas and experiences are explored. For example, on entering school, a child can worry about what happens if rules are broken, if the teacher gets angry, if others fight and about "what's wrong with me if I see letters upside down". Indeed, some stress is inevitable and has been described by Piaget as a necessary factor for learning.

Now how stresses can affect the organization of children's thinking and how individual children respond uniquely to them. In some children a sequence of responses often follows their facing a stress situation in ways that can interfere with emotional and psychological capacities. An understanding of such responses to stress may equip the educator better in helping the troubled child particularly the child who is especially vulnerable.

When you watch children carefully, you can see that some respond to stress by gaining a greater degree of organization of their thinking and acting. These fortunate children have an innate,

built-in capacity to mobilize thinking. They act better under tension. Although an experience they face is stressful, these children do not become upset or worried, but instead seem to gain from it all. Such children mediate the stressful condition in a flexible way, integrating new schemes. Their synthetic, cognitive capacities allow them to learn from the stressful event and they accommodate to a great degree. These children have an easier time in dealing with crisis situations than a second group, comprised of the majority of their peers, who also usually find answers to crises and devise strategies for taking them in stride without adverse reactions.

The children in greatest need of our help are in a third group whose thinking and acting can disorganize in stressful situations. These children have what seems to be a constitutionally based difficulty in integration of anxiety or tension-producing experiences. To understand these unfortunate children within the framework of how their experiences can then affect their feelings and adjustment, one must first be aware of their pattern of reacting. From very early in life—even from infancy—their response to stress is for the mind to go blank. They disorganize; their self-experience can then be one of helplessness. Where this tendency is an exaggerated one, a few such children may even experience it as a feeling of catastrophe. In other words, they have a built-in make up which leaves them at risk for be-

coming confused, disorganized and upset when they are stressed. This make up interferes with their ability to move toward greater accommodation and some of them protectively respond in rigid and almost paralyzed ways when they experience stress. They don't learn from experience or deal with the source of the stress, and they therefore have difficulty in finding answers to problems. Children tell us that the resulting feeling of helplessness is one of the worst in the world.

In many instances, we are able to determine if children have this built-in disorganization problem by listening to their self-experiences of the learning process. Often children, if given the chance, will tell a parent or teacher about the disorganization. For example, they sometimes say, "all of a sudden everything went blank... I couldn't remember anything"; others only hint at this terrible helpless feeling that abruptly presents itself without apparent reason. There is no formula to finding out who these children are except to watch and listen carefully. Once such children are identified, the next step is to try to understand how they deal with the disorganization to avoid a feeling of helplessness.

Looking for Reasons

As seen in some cases it seems that the presenting behaviour or symptoms are in themselves non-specific. They only tell us that something is wrong. When you look further to find the reasons

for the child needing a symptom, we suggest that you keep your eyes and ears open to their pattern of disorganization of thinking and acting under stress. It can be the source of inner stress and interfere with the ability to deal with outer stress.

The responses of avoidance and withdrawal prevent an integrating of the stressful experience. These attempts at self-protection usually put the child in a position where constructive coping energies are not found; and the resultant frightening helplessness cannot be a growth experience.

Similarly, various responses that are understood within the framework of dependency—i.e., those children who look for someone to take care of them when they feel helpless—are self-defeating and prevent the conflict from becoming an organizer. Some children respond to their fear of being unable to mobilize themselves by becoming excessively dependent on others, so that their teacher or parents must carry on the responsibility of negotiating stressful experiences for them. Some children, in contrast attempt to reverse this response pattern by adopting an, I know it all, excessively independent posture. Others create still another type of behaviour, which can be labeled 'acting out,' calculated to make the teacher or the parent feel helpless so that they won't feel helpless themselves. All of these responses actually are one extreme or the other on the dependency continuum. At the same time, they are

self-defeating behaviours, which prevent the child from receiving help from others.

A third general response-style that can be extremely self-defeating for the child who disorganizes under stress is the exaggeration of earlier, unresolved fears. Some children become preoccupied with fears of losing their loved ones or of getting hurt or dying themselves in a sense, the fears occupy the child's mind and perhaps temporarily move attention away from a present stressful experience; but in the end the fears only exaggerate the cognitive disorganization.

Ways to improve Coping Skills

Finally, it is clear that the teacher or parent can help the child who is struggling with the tendency to disorganize under stress.

The first step is recognizing individual differences in children's styles of reaction to stress. The child who has a hysterical personality organization responds to stress with a fear that it will keep on going and get worse. When asked to respond orally in front of the class, the child whose response style is hysterical needs to be helped to stop the disorganization and feeling of helplessness by assurance that the situation is not a catastrophe, can be ameliorated and will not go on forever. In this way, the child is prepared

to develop techniques to stop the self-defeating process—such as pausing when the mind goes blank and taking a short "time out" to reorganize. These children are often able to return to the stressful task or situation in a more integrated and constructive way instead of feeling hopeless about it.

Children with a compulsive personality foundation can also be assisted to learn how to stop themselves from feeling helpless when the disorganization begins. For example, a child relatively weak in mathematics may experience high levels of stress and the tendency to disorganize when confronted with a multi-step problem. A helpful strategy is to encourage these children to stop themselves for a moment as soon as the disorganization begins. Then they can isolate and concentrate on one small detail or aspect of the task that is stressful. This action can enable them to return to the whole task.

These insights have been brought out by Reginald S. Lourie, Professor in Child Health and Behavioural Development in George Washington University, and Charles Schwarzbeck, Clinical Instructor in Psychiatry, in the same University's School of Medicine, in a paper published in 'Childhood Education', Journal of the Association for Childhood Education International.

JOURNAL OF INDIAN E D U C A T I O N

The *Journal of Indian Education* is a bi-monthly periodical published by the National Council of Educational Research and Training, New Delhi.

The purpose is to provide a forum for teachers, teacher-educators, educational administrators and research workers, to encourage original and critical thinking in education through the discussion of current educational views, and to promote the development and improvement of educational practice. The contents include articles by distinguished educationists, challenging discussions, critical analyses of educational problems, book reviews and other features.

Manuscripts sent in for publication should be *exclusive* to the *Journal of Indian Education*. They should be in duplicate, typed double-spaced and on one side of the sheet only, addressed to the General Editor, *Journal of Indian Education*, Journals Cell, NIE Campus, Sri Aurobindo Marg, New Delhi-110016. Contributions accepted are paid for on publication.

The views expressed by individual authors are their own and do not necessarily reflect the policies of the Council.

Copyright of manuscripts published in the journal will vest in the NCERT and no matter may be reproduced in any form without the prior permission of the Council.

Published by V. K. Pandit, Secretary, National Council of Educational Research and Training, Sri Aurobindo Marg, New Delhi-110016, and printed at Everest Press, 4 Chamelian Road, Delhi.

General Editor : Prof. R. P. Singh

Regd. No. 28935/76

